

# **Federal and Provincial Government Expenditures to Assist and Promote Rental Housing in Canada 1976 — 1982**

**MAY, 1984**

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MANAGEMENT CONSULTANTS**

FEDERAL AND PROVINCIAL GOVERNMENT EXPENDITURES  
TO ASSIST AND PROMOTE RENTAL HOUSING IN CANADA

1976-1982

PART I - REPORT

by: Arthur Anderson + Co.

for: Canadian Home Builders Assn.

MAY, 1984

FEDERAL AND PROVINCIAL GOVERNMENT EXPENDITURES

TO ASSIST AND PROMOTE RENTAL HOUSING IN CANADA

1976-1982

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FEDERAL AND PROVINCIAL GOVERNMENT EXPENDITURES  
TO ASSIST AND PROMOTE RENTAL HOUSING IN CANADA

MANAGEMENT SUMMARY

At the request of the Canadian Home Builders' Association we have gathered and summarized data on federal and provincial government expenditures to assist and promote rental housing in Canada in the years 1976 to 1982.

Our calculations are based on available data and a number of estimates and assumptions which are described in this Report and the Statistical Appendix.

We have calculated the total budgetary and tax expenditures on both a "current expenditure" basis and a "present value" basis.

- The current expenditure basis is the way governments report the cost of programs and activities in their financial statements.
- The present value basis provides a consistent comparison of the cost of different programs. These figures represent the total amount committed to rental housing programs each year. Present value basis figures are estimates of the total investment required to cover all future government subsidy costs for rental housing units approved each year.

Total federal and provincial budgetary and tax expenditures on rental housing on a current expenditure basis are shown in the following table.

TOTAL RENTAL HOUSING BUDGETARY AND TAX EXPENDITURES  
(\$ MILLIONS)

YEAR	1976	1977	1978	1979	1980	1981	1982
CURRENT EXPENDITURE	\$ 365	\$ 489	\$ 619	\$ 769	\$ 880	\$ 1,054	\$ 1,300

We were also asked to project total federal and provincial government expenditures to assist and promote rental housing in Canada in the years 1983 to 1990 under two sets of assumptions:

- No new units are committed under any programs after 1983. All costs after 1983 represent the on-going costs of programs and units committed in earlier years.
- In addition to the previously committed units, the following new units are committed in each of the years 1984 to 1990:
  - 22500 units under the Non-Profit and Cooperative program
  - 2000 units under the Public Housing program
  - 315 units under the Private Rent Supplement program.

The results of the projections, assuming the new units are committed, are shown in the following table.

**TOTAL PROJECTED RENTAL HOUSING BUDGETARY AND TAX EXPENDITURES  
(\$ MILLIONS)**

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
	\$1,399	\$1,474	\$1,552	\$1,660	\$1,765	\$1,857	\$1,981	\$2,127

The annual totals in this Executive Summary and the detailed amounts in the Report and the Statistical Appendix are based on estimates and assumptions. They should not be used without reference to the supporting explanatory material in the Report and Statistical Appendix.

#### APPROACH

The primary approach was to gather and summarize available data from the federal and provincial government agencies responsible for rental housing. The data was obtained from published reports of federal and provincial governments and agencies, from previous studies by Clayton Research Associates Ltd. (which were in turn based on data obtained from the governments and agencies) and from unpublished internal documents of the governments and agencies.

The estimates used and assumptions made and the sources of information are disclosed in the Report and the Statistical Appendix. Where possible, we have discussed or compared our estimates with data from CMHC (Canada Mortgage and Housing Corporation), Clayton Research Associates Ltd. and the government departments, agencies and crown corporations involved. We would like to acknowledge the help received from these organizations.

#### PROGRAMS INCLUDED

The scope of this report was restricted to federal, provincial and shared federal-provincial programs identified by the governments as designed to assist and promote the construction or rehabilitation of rental housing. The programs included were:

- Non-Profit and Cooperative
- Public Housing
- Private Rent Supplement
- Other Provincial Programs
- Residential Rehabilitation Assistance
- Assisted Rental Program
- Canada Rental Supply Plan
- MURB Tax Expenditures.

## **SUMMARY TABLES**

The tables and graphs on the following pages present the total rental housing budgetary and tax expenditures by program and by federal and provincial government shares.

FEDERAL AND PROVINCIAL EXPENDITURES  
TO ASSIST RENTAL HOUSING IN CANADA

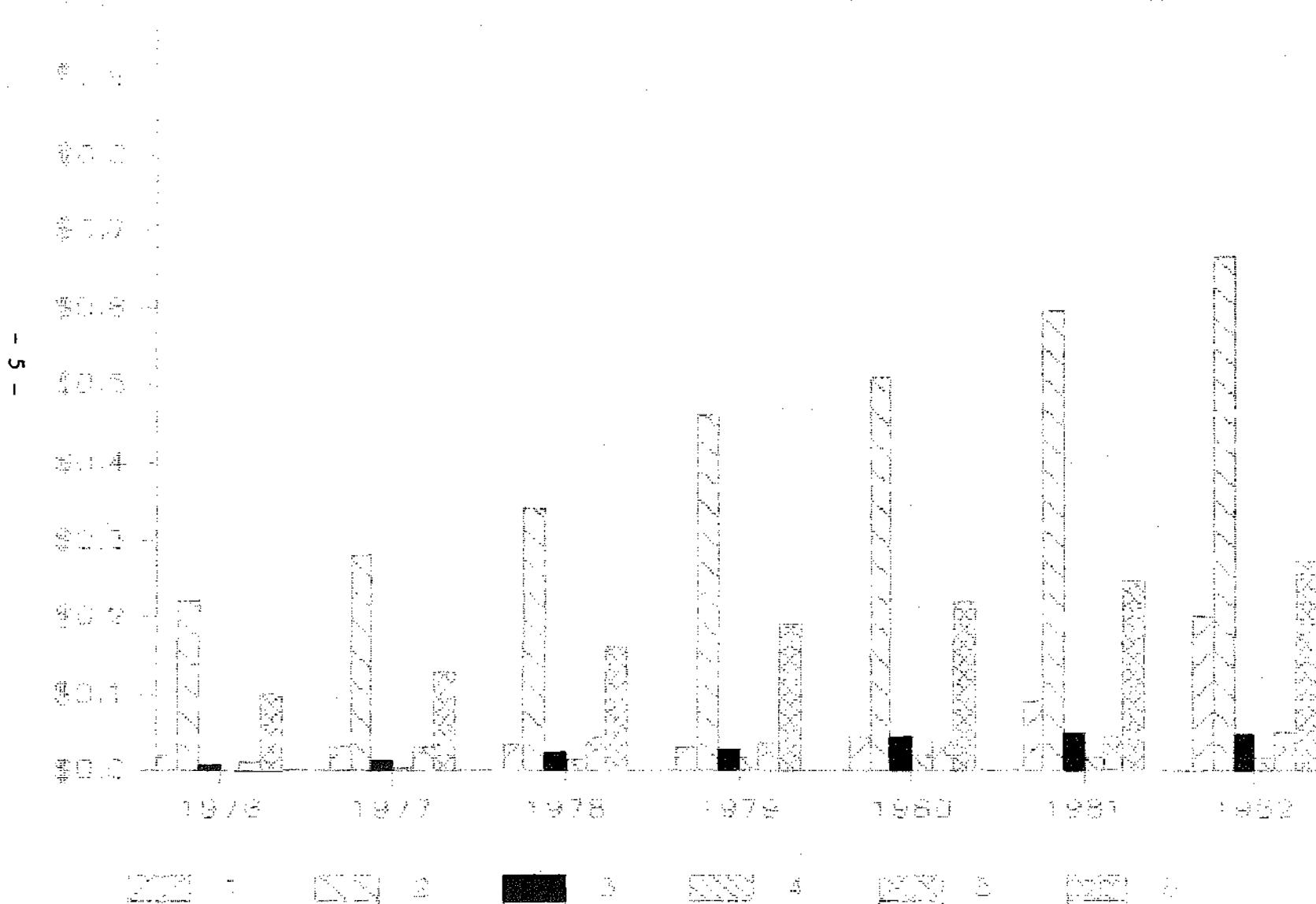
BY PROGRAM

CURRENT EXPENDITURE BASIS  
(\$ Millions)

<u>BUDGETARY EXPENDITURES</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<b>PROVINCIAL &amp; FEDERAL SHARED PROGRAMS</b>							
Non-Profit and Cooperative							
Provincial Share	\$ 1	\$ 1	\$ 1	\$ 2	\$ 7	\$ 15	\$ 4
Federal Share	<u>21</u>	<u>31</u>	<u>32</u>	<u>27</u>	<u>36</u>	<u>74</u>	<u>197</u>
Total	<u>\$ 22</u>	<u>\$ 32</u>	<u>\$ 33</u>	<u>\$ 29</u>	<u>\$ 43</u>	<u>\$ 89</u>	<u>\$ 201</u>
Public Housing							
Provincial Share	\$ 115	\$ 138	\$ 162	\$ 198	\$ 249	\$ 275	\$ 268
Federal Share	<u>107</u>	<u>141</u>	<u>179</u>	<u>265</u>	<u>263</u>	<u>320</u>	<u>399</u>
Total	<u>\$ 222</u>	<u>\$ 279</u>	<u>\$ 341</u>	<u>\$ 463</u>	<u>\$ 512</u>	<u>\$ 595</u>	<u>\$ 667</u>
Private Rent Supplement							
Provincial Share	\$ 4	\$ 7	\$ 16	\$ 18	\$ 28	\$ 30	\$ 30
Federal Share	<u>5</u>	<u>7</u>	<u>9</u>	<u>9</u>	<u>15</u>	<u>16</u>	<u>17</u>
Total	<u>\$ 9</u>	<u>\$ 14</u>	<u>\$ 25</u>	<u>\$ 27</u>	<u>\$ 43</u>	<u>\$ 46</u>	<u>\$ 47</u>
Total Shared Programs	<u>\$ 253</u>	<u>\$ 325</u>	<u>\$ 399</u>	<u>\$ 519</u>	<u>\$ 598</u>	<u>\$ 730</u>	<u>\$ 915</u>
PROVINCIAL PROGRAMS	<u>\$ 1</u>	<u>\$ 5</u>	<u>\$ 16</u>	<u>\$ 22</u>	<u>\$ 26</u>	<u>\$ 34</u>	<u>\$ 61</u>
<b>FEDERAL PROGRAMS</b>							
Rental Portion, Residential							
Rehabilitation Assistance Program	\$ 8	\$ 19	\$ 25	\$ 17	\$ 12	\$ 14	\$ 18
Assisted Rental Program	<u>4</u>	<u>10</u>	<u>18</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>32</u>
Canada Rental Supply Plan	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
Total Federal Programs	<u>\$ 12</u>	<u>\$ 29</u>	<u>\$ 43</u>	<u>\$ 37</u>	<u>\$ 37</u>	<u>\$ 44</u>	<u>\$ 51</u>
TOTAL BUDGETARY EXPENDITURES	<u>\$ 266</u>	<u>\$ 359</u>	<u>\$ 458</u>	<u>\$ 578</u>	<u>\$ 661</u>	<u>\$ 808</u>	<u>\$ 1,027</u>
<b>TAX EXPENDITURES</b>							
<b>PROVINCIAL &amp; FEDERAL SHARED PROGRAMS</b>							
MURB Program							
Provincial Share	\$ 33	\$ 43	\$ 53	\$ 63	\$ 73	\$ 81	\$ 90
Federal Share	<u>66</u>	<u>87</u>	<u>108</u>	<u>128</u>	<u>146</u>	<u>165</u>	<u>183</u>
TOTAL TAX EXPENDITURES	<u>\$ 99</u>	<u>\$ 130</u>	<u>\$ 161</u>	<u>\$ 191</u>	<u>\$ 219</u>	<u>\$ 246</u>	<u>\$ 273</u>
TOTAL CURRENT BUDGETARY AND TAX EXPENDITURES	<u>\$ 365</u>	<u>\$ 489</u>	<u>\$ 619</u>	<u>\$ 769</u>	<u>\$ 880</u>	<u>\$ 1,054</u>	<u>\$ 1,300</u>
TOTAL PROVINCIAL	<u>\$ 154</u>	<u>\$ 194</u>	<u>\$ 248</u>	<u>\$ 303</u>	<u>\$ 383</u>	<u>\$ 435</u>	<u>\$ 453</u>
TOTAL FEDERAL	<u>211</u>	<u>295</u>	<u>371</u>	<u>466</u>	<u>497</u>	<u>619</u>	<u>847</u>
TOTAL CURRENT FEDERAL AND PROVINCIAL EXPENDITURES	<u>\$ 365</u>	<u>\$ 489</u>	<u>\$ 619</u>	<u>\$ 769</u>	<u>\$ 880</u>	<u>\$ 1,054</u>	<u>\$ 1,300</u>

# FEDERAL HOUSING EXPENDITURE BY PROGRAM

## CURRENT EXPENDITURE BASIS (BILLIONS)



1 - Non-Profit and Cooperative

2 - Public Housing

3 - Private Rent Supplement

4 - Other Provincial Programs

5 - Federal Programs - Rental Portion, Residential Rehabilitation Assistance Program

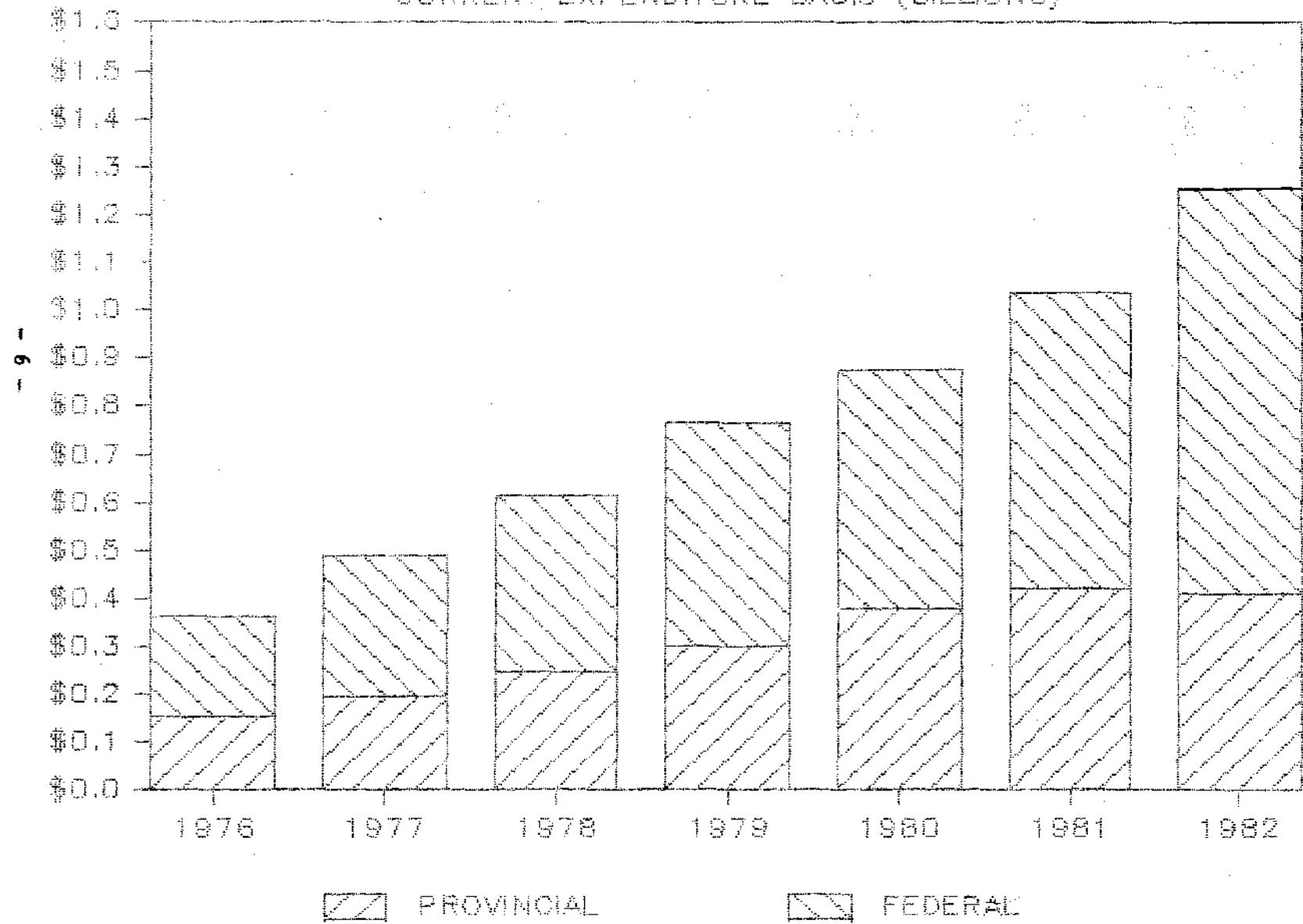
- Assisted Rental Program

- Canadian Rental Supply Plan

6 - M.U.R.B. Program

# EXPENDITURES TO ASSIST RENTAL HOUSING

CURRENT EXPENDITURE BASIS (BILLIONS)



FEDERAL AND PROVINCIAL EXPENDITURES  
TO ASSIST RENTAL HOUSING IN CANADA

BY PROGRAM

PRESENT VALUE BASIS  
(\$ Millions)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
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BUDGETARY EXPENDITURES

PROVINCIAL & FEDERAL SHARED PROGRAMS

Non-Profit and Cooperative							
Provincial Share	\$ 62	\$ 41	\$ 27	\$ -	\$ -	\$ -	\$ -
Federal Share	<u>153</u>	<u>102</u>	<u>64</u>	<u>566</u>	<u>913</u>	<u>892</u>	<u>998</u>
Total	<u>215</u>	<u>143</u>	<u>191</u>	<u>566</u>	<u>913</u>	<u>892</u>	<u>998</u>
Public Housing							
Provincial Share	\$ 233	\$ 201	\$ 407	\$ 104	\$ 104	\$ 72	\$ 73
Federal Share	<u>270</u>	<u>238</u>	<u>455</u>	<u>145</u>	<u>143</u>	<u>115</u>	<u>114</u>
Total	<u>503</u>	<u>439</u>	<u>862</u>	<u>249</u>	<u>247</u>	<u>187</u>	<u>187</u>
Private Rent Supplement							
Provincial Share	\$ 17	\$ 19	\$ 38	\$ 30	\$ 10	\$ 6	\$ 11
Federal Share	<u>17</u>	<u>19</u>	<u>38</u>	<u>30</u>	<u>10</u>	<u>6</u>	<u>11</u>
Total	<u>34</u>	<u>38</u>	<u>76</u>	<u>60</u>	<u>20</u>	<u>12</u>	<u>22</u>
Total Shared Programs	<u>752</u>	<u>620</u>	<u>1,129</u>	<u>875</u>	<u>1,180</u>	<u>1,091</u>	<u>1,207</u>

FEDERAL PROGRAMS

Rental Portion, Residential							
Rehabilitation Assistance Program	\$ 11	\$ 23	\$ 25	\$ 13	\$ 21	\$ 19	\$ 22
Assisted Rental Program	60	135	42	-	-	-	-
Canada Rental Supply Plan	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>118</u>
Total Federal Programs	<u>71</u>	<u>158</u>	<u>67</u>	<u>13</u>	<u>21</u>	<u>19</u>	<u>140</u>

TOTAL BUDGETARY EXPENDITURES	<u>823</u>	<u>778</u>	<u>1,196</u>	<u>888</u>	<u>1,201</u>	<u>1,110</u>	<u>1,347</u>
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TAX EXPENDITURES

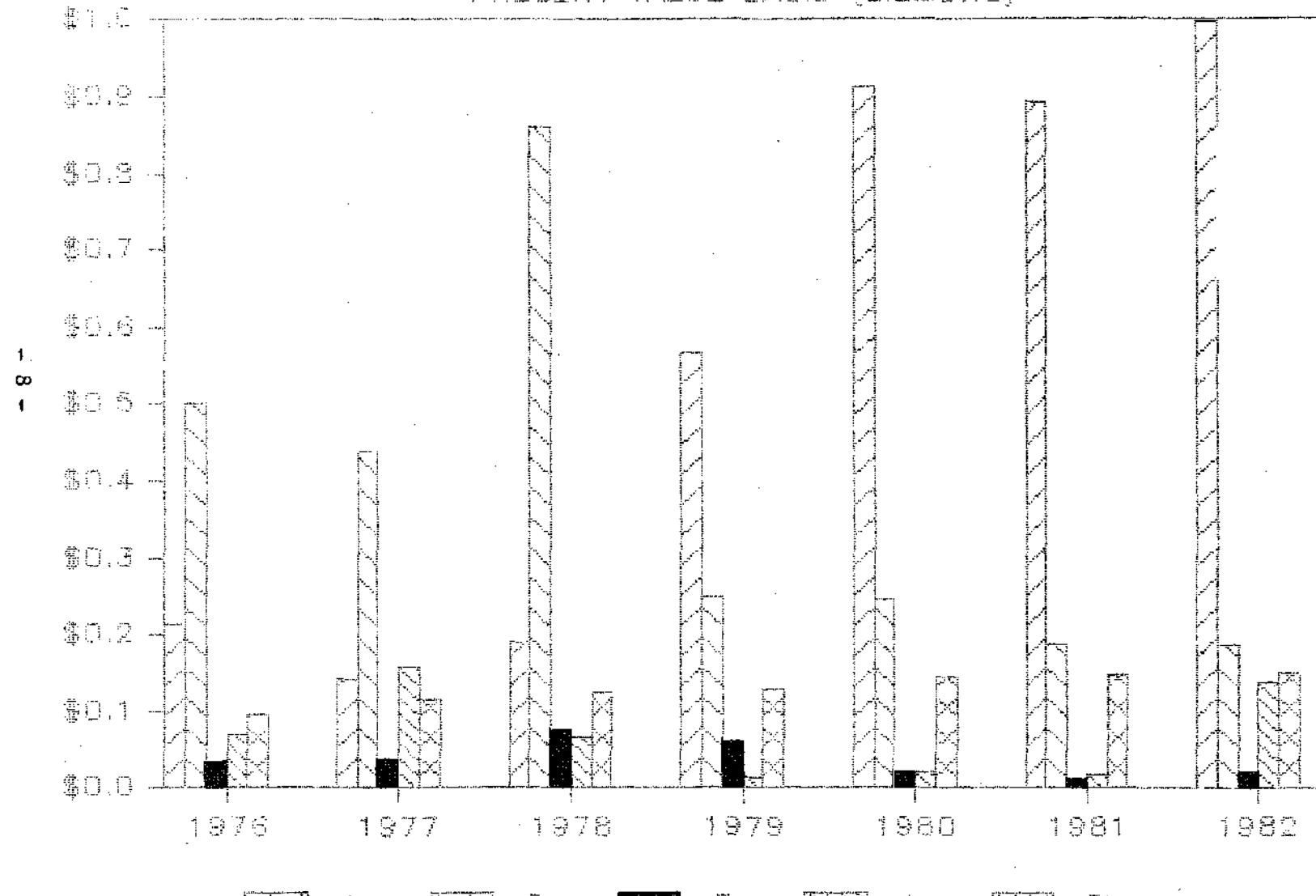
PROVINCIAL & FEDERAL SHARED PROGRAMS

MURB Program							
Provincial Share	\$ 32	\$ 38	\$ 41	\$ 44	\$ 48	\$ 49	\$ 50
Federal Share	<u>66</u>	<u>78</u>	<u>84</u>	<u>84</u>	<u>96</u>	<u>100</u>	<u>101</u>
TOTAL TAX EXPENDITURES	<u>98</u>	<u>116</u>	<u>125</u>	<u>128</u>	<u>144</u>	<u>149</u>	<u>151</u>
<u>TOTAL PRESENT VALUE BUDGETARY AND TAX EXPENDITURES</u>	<u>921</u>	<u>894</u>	<u>1,321</u>	<u>1,016</u>	<u>1,345</u>	<u>1,259</u>	<u>1,498</u>

TOTAL PROVINCIAL	\$ 344	\$ 299	\$ 513	\$ 178	\$ 162	\$ 127	\$ 134
TOTAL FEDERAL	<u>577</u>	<u>595</u>	<u>808</u>	<u>838</u>	<u>1,183</u>	<u>1,132</u>	<u>1,364</u>
<u>TOTAL PRESENT VALUE FEDERAL AND PROVINCIAL EXPENDITURES</u>	<u>921</u>	<u>894</u>	<u>1,321</u>	<u>1,016</u>	<u>1,345</u>	<u>1,259</u>	<u>1,498</u>

# RENTAL HOUSING EXPENDITURE BY PROGRAM

PRESENT VALUE BASIS (BILLIONS)



1 - Non-Profit and Cooperative

2 - Public Housing

3 - Private Rent Supplement

4 - Federal Programs - Rental Portion, Residential Rehabilitation Assistance Program

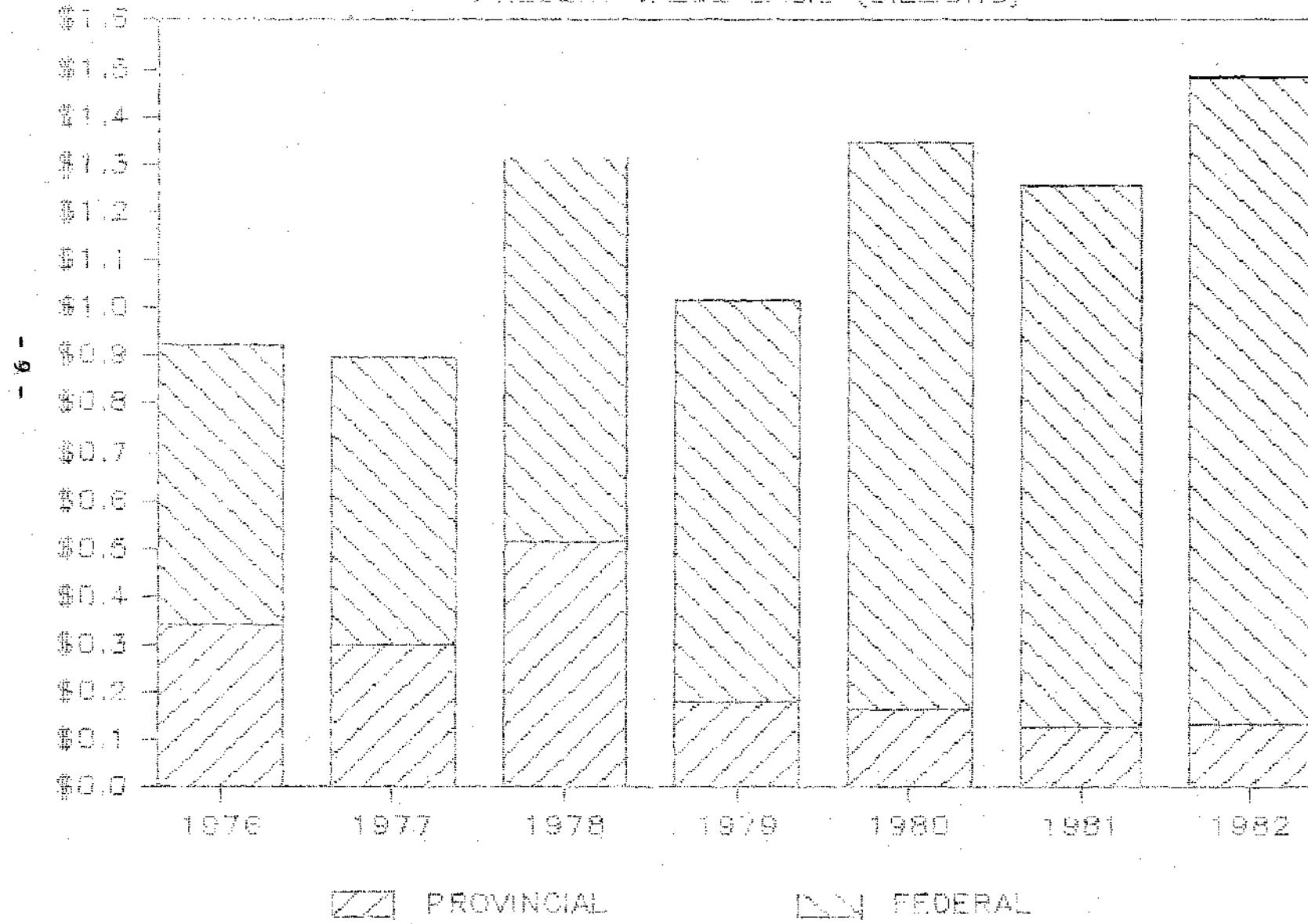
- Assisted Rental Program

- Canadian Rental Supply Plan

5 - M.U.R.B. Program

# EXPENDITURES TO ASSIST RENTAL HOUSING

PRESENT VALUE BASIS (BILLIONS)



PROJECTED FEDERAL AND PROVINCIAL EXPENDITURES  
TO ASSIST RENTAL HOUSING IN CANADA  
ASSUMING NO UNITS COMMITTED AFTER 1983

BY PROGRAM

CURRENT EXPENDITURE BASIS  
(\$ Millions)

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
<u>BUDGETARY EXPENDITURES</u>								
PROVINCIAL & FEDERAL SHARED PROGRAMS								
Non-Profit and Cooperative								
Provincial Share	\$ 18	\$ 18	\$ 18	\$ 19	\$ 19	\$ 20	\$ 20	\$ 20
Federal Share	<u>399</u>	<u>507</u>	<u>502</u>	<u>498</u>	<u>493</u>	<u>489</u>	<u>485</u>	<u>480</u>
Total	<u>\$ 417</u>	<u>\$ 525</u>	<u>\$ 520</u>	<u>\$ 517</u>	<u>\$ 512</u>	<u>\$ 509</u>	<u>\$ 505</u>	<u>\$ 500</u>
Public Housing								
Provincial Share	\$ 267	\$ 273	\$ 278	\$ 284	\$ 290	\$ 296	\$ 303	\$ 310
Federal Share	<u>328</u>	<u>334</u>	<u>341</u>	<u>348</u>	<u>355</u>	<u>363</u>	<u>371</u>	<u>380</u>
Total	<u>\$ 595</u>	<u>\$ 607</u>	<u>\$ 619</u>	<u>\$ 632</u>	<u>\$ 645</u>	<u>\$ 659</u>	<u>\$ 674</u>	<u>\$ 690</u>
Private Rent Supplement								
Provincial Share	\$ 24	\$ 17	\$ 9	\$ 7	\$ 6	\$ 3	\$ -	\$ -
Federal Share	<u>24</u>	<u>17</u>	<u>9</u>	<u>7</u>	<u>6</u>	<u>3</u>	<u>-</u>	<u>-</u>
Total	<u>\$ 48</u>	<u>\$ 34</u>	<u>\$ 18</u>	<u>\$ 14</u>	<u>\$ 12</u>	<u>\$ 6</u>	<u>\$ -</u>	<u>\$ -</u>
Total Shared Programs	<u>\$1,060</u>	<u>\$1,166</u>	<u>\$1,157</u>	<u>\$1,163</u>	<u>\$1,169</u>	<u>\$1,174</u>	<u>\$1,179</u>	<u>\$1,190</u>

FEDERAL PROGRAMS

Assisted Rental Program	\$ 46	\$ 50	\$ 53	\$ 55	\$ 42	\$ 10	\$ -	\$ -
Canada Rental Supply Plan	<u>12</u>	<u>23</u>						
Total Federal Programs	<u>\$ 58</u>	<u>\$ 73</u>	<u>\$ 76</u>	<u>\$ 78</u>	<u>\$ 65</u>	<u>\$ 33</u>	<u>\$ 23</u>	<u>\$ 23</u>
TOTAL BUDGETARY EXPENDITURES	<u>\$1,118</u>	<u>\$1,239</u>	<u>\$1,233</u>	<u>\$1,241</u>	<u>\$1,234</u>	<u>\$1,207</u>	<u>\$1,202</u>	<u>\$1,213</u>

TAX EXPENDITURES

PROVINCIAL & FEDERAL SHARED PROGRAMS

MURB Program								
Provincial Share	\$ 94	\$ 76	\$ 61	\$ 50	\$ 40	\$ 31	\$ 23	\$ 15
Federal Share	<u>187</u>	<u>153</u>	<u>122</u>	<u>100</u>	<u>80</u>	<u>61</u>	<u>45</u>	<u>31</u>
TOTAL TAX EXPENDITURES	<u>\$ 281</u>	<u>\$ 229</u>	<u>\$ 183</u>	<u>\$ 150</u>	<u>\$ 120</u>	<u>\$ 92</u>	<u>\$ 68</u>	<u>\$ 46</u>
<u>TOTAL CURRENT BUDGETARY AND</u>								
<u>TAX EXPENDITURES</u>	<u>\$1,399</u>	<u>\$1,468</u>	<u>\$1,416</u>	<u>\$1,391</u>	<u>\$1,354</u>	<u>\$1,299</u>	<u>\$1,270</u>	<u>\$1,259</u>

TOTAL PROVINCIAL	\$ 403	\$ 384	\$ 366	\$ 360	\$ 355	\$ 350	\$ 346	\$ 345
TOTAL FEDERAL	<u>996</u>	<u>1,084</u>	<u>1,050</u>	<u>1,031</u>	<u>999</u>	<u>949</u>	<u>924</u>	<u>914</u>
<u>TOTAL CURRENT FEDERAL AND</u>								
<u>PROVINCIAL EXPENDITURES</u>	<u>\$1,399</u>	<u>\$1,468</u>	<u>\$1,416</u>	<u>\$1,391</u>	<u>\$1,354</u>	<u>\$1,299</u>	<u>\$1,270</u>	<u>\$1,259</u>

PROJECTED FEDERAL AND PROVINCIAL EXPENDITURES  
TO ASSIST RENTAL HOUSING IN CANADA

ASSUMING NON-PROFIT AND COOPERATIVE, PUBLIC HOUSING AND PRIVATE RENT SUPPLEMENT PROGRAMS CONTINUE

BY PROGRAM

CURRENT EXPENDITURE BASIS  
(\$ Millions)

<u>BUDGETARY EXPENDITURES</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
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**PROVINCIAL & FEDERAL SHARED PROGRAMS**

Non-Profit and Cooperative								
Provincial Share	\$ 18	\$ 18	\$ 18	\$ 19	\$ 19	\$ 20	\$ 20	\$ 20
Federal Share	<u>399</u>	<u>507</u>	<u>624</u>	<u>747</u>	<u>875</u>	<u>1,009</u>	<u>1,148</u>	<u>1,293</u>
Total	<u>\$ 417</u>	<u>\$ 525</u>	<u>\$ 642</u>	<u>\$ 766</u>	<u>\$ 894</u>	<u>\$1,029</u>	<u>\$1,168</u>	<u>\$1,313</u>
Public Housing								
Provincial Share	\$ 267	\$ 275	\$ 283	\$ 291	\$ 299	\$ 308	\$ 318	\$ 328
Federal Share	<u>328</u>	<u>338</u>	<u>348</u>	<u>359</u>	<u>371</u>	<u>383</u>	<u>396</u>	<u>409</u>
Total	<u>\$ 595</u>	<u>\$ 613</u>	<u>\$ 631</u>	<u>\$ 650</u>	<u>\$ 670</u>	<u>\$ 691</u>	<u>\$ 714</u>	<u>737</u>
Private Rent Supplement								
Provincial Share	\$ 24	\$ 17	\$ 10	\$ 8	\$ 8	\$ 6	\$ 4	\$ 4
Federal Share	<u>24</u>	<u>17</u>	<u>10</u>	<u>8</u>	<u>8</u>	<u>6</u>	<u>4</u>	<u>4</u>
Total	<u>\$ 48</u>	<u>\$ 34</u>	<u>\$ 20</u>	<u>\$ 16</u>	<u>\$ 16</u>	<u>\$ 12</u>	<u>\$ 8</u>	<u>\$ 8</u>
<b>Total Shared Programs</b>	<b><u>\$1,060</u></b>	<b><u>\$1,172</u></b>	<b><u>\$1,293</u></b>	<b><u>\$1,432</u></b>	<b><u>\$1,580</u></b>	<b><u>\$1,732</u></b>	<b><u>\$1,890</u></b>	<b><u>\$2,058</u></b>

**FEDERAL PROGRAMS**

Assisted Rental Program	\$ 46	\$ 50	\$ 53	\$ 55	\$ 42	\$ 10	\$ -	\$ -
Canada Rental Supply Plan	<u>12</u>	<u>23</u>						
Total Federal Programs	<u>\$ 58</u>	<u>\$ 73</u>	<u>\$ 76</u>	<u>\$ 78</u>	<u>\$ 65</u>	<u>\$ 33</u>	<u>\$ 23</u>	<u>\$ 23</u>
<b>TOTAL BUDGETARY EXPENDITURES</b>	<b><u>\$1,118</u></b>	<b><u>\$1,245</u></b>	<b><u>\$1,369</u></b>	<b><u>\$1,510</u></b>	<b><u>\$1,645</u></b>	<b><u>\$1,765</u></b>	<b><u>\$1,913</u></b>	<b><u>\$2,081</u></b>

**TAX EXPENDITURES**

**PROVINCIAL & FEDERAL SHARED PROGRAMS**

MURB Program								
Provincial Share	\$ 94	\$ 76	\$ 61	\$ 50	\$ 40	\$ 31	\$ 23	\$ 15
Federal Share	<u>187</u>	<u>153</u>	<u>122</u>	<u>100</u>	<u>80</u>	<u>61</u>	<u>45</u>	<u>31</u>
<b>TOTAL TAX EXPENDITURES</b>	<b><u>\$ 281</u></b>	<b><u>\$ 229</u></b>	<b><u>\$ 183</u></b>	<b><u>\$ 150</u></b>	<b><u>\$ 120</u></b>	<b><u>\$ 92</u></b>	<b><u>\$ 68</u></b>	<b><u>\$ 46</u></b>
<b>TOTAL CURRENT BUDGETARY AND TAX EXPENDITURES</b>	<b><u>\$1,399</u></b>	<b><u>\$1,474</u></b>	<b><u>\$1,552</u></b>	<b><u>\$1,660</u></b>	<b><u>\$1,765</u></b>	<b><u>\$1,857</u></b>	<b><u>\$1,981</u></b>	<b><u>\$2,127</u></b>

<b>TOTAL PROVINCIAL</b>	<b><u>\$ 403</u></b>	<b><u>\$ 386</u></b>	<b><u>\$ 372</u></b>	<b><u>\$ 368</u></b>	<b><u>\$ 366</u></b>	<b><u>\$ 365</u></b>	<b><u>\$ 365</u></b>	<b><u>\$ 367</u></b>
<b>TOTAL FEDERAL</b>	<b><u>996</u></b>	<b><u>1,088</u></b>	<b><u>1,180</u></b>	<b><u>1,292</u></b>	<b><u>1,399</u></b>	<b><u>1,492</u></b>	<b><u>1,616</u></b>	<b><u>1,760</u></b>
<b>TOTAL CURRENT FEDERAL AND PROVINCIAL EXPENDITURES</b>	<b><u>\$1,399</u></b>	<b><u>\$1,474</u></b>	<b><u>\$1,552</u></b>	<b><u>\$1,660</u></b>	<b><u>\$1,765</u></b>	<b><u>\$1,857</u></b>	<b><u>\$1,981</u></b>	<b><u>\$2,127</u></b>

RENTAL HOUSING UNITS COMMITTED OR APPROVED

AS REPORTED BY CMHC

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Old Non-Profit	10,093	6,273	3,125					
New Non-Profit			2,965	16,642	24,907	22,243	22,778	21,500
Public Housing	11,328	9,022	16,766	4,570	4,282	2,983	2,760	1,400
Private Rent Supplement	2,637	2,880	5,396	4,022	1,250	734	1,293	1,200
Residential Rehabilitation Assistance Rental Units	4,337	9,175	10,163	5,076	8,461	7,789	8,674	12,628
Assisted Rental Program	25,231	56,905	17,483					
Canada Rental Supply Plan							10,697	10,241
MURB Tax Expenditure Program	35,219	82,265	80,089	76,550		44,382		

NOTE:

These figures should be used with caution for several reasons:

1. All units committed or approved may not have been built.
2. The year of start or completion may not be the year of commitment or approval.
3. Some rental housing units may be included in more than one program.

## APPROACH

The primary approach was to gather and summarize available data from the federal and provincial government agencies responsible for rental housing. The data was obtained from published reports of federal and provincial governments and agencies, from previous studies by Clayton Research Associates Ltd. (which were in turn based on data obtained from the governments and agencies) and from unpublished internal documents of the governments and agencies.

It was necessary to use a number of estimates and assumptions to develop the data included in this report.

- Complete data on budgetary expenditures on a consistent basis is not available from all governments. In cases where data was not available because annual reports had not yet been published or for other reasons, it was necessary to estimate figures as being equal to the next prior year for which information was available. Since many provinces have not yet published reports covering 1983, data for that year is not included in the scope of this report.
- Governments do not maintain complete records on tax expenditures (the amount of tax which would have otherwise been collected) for such programs as MURB (Multiple Unit Residential Buildings started during certain periods). These tax expenditures can only be estimated.
- The various provincial governments, agencies and crown corporations are not consistent in the way they describe programs and report expenditures. As a result, it is likely that some provincial expenditures included in this Report have been misclassified between the various rental housing programs. Also, programs which relate to rental housing may have been excluded while others not relating to rental housing may have been included. As a result, although the total current provincial expenditures are conservatively stated, the totals for each program may be inaccurate.

The estimates used and assumptions made and the sources of information are disclosed in this Report and the Statistical Appendix. Where possible, we have discussed or compared our estimates with data from CMHC (Canada Mortgage and Housing Corporation), Clayton Research Associates Ltd. and the government departments, agencies and crown corporations involved. We would like to acknowledge the help received from these organizations.

## PROGRAMS INCLUDED

The scope of this report was restricted to federal, provincial and shared federal - provincial programs identified by the governments as designed to support and assist the construction or rehabilitation of rental housing. The programs included are briefly described in this section. More detailed information is included in the Statistical Appendix or is available from the responsible government agencies.

### Non-Profit and Cooperative

These programs support rental housing units owned and operated by non-profit organizations and cooperatives. A program in place until 1978 provided a 10% grant and a 50 year 8% mortgage on the remaining cost. A shared federal provincial program provided a rent-geared-to-income subsidy on approximately 25% of the units constructed under the federal program. A new federal program introduced in 1978 allowed the public and private non-profit and cooperative organizations to borrow 100% of the capital cost of the project from private lenders, insured by CMHC. The federal subsidy is based on the difference between the payments on the mortgage at market interest rates and the payments if the interest rate were 2%.

### Public Housing

Public housing programs provide housing to low income individuals and families at rents calculated based on their income. The units are owned by provinces, jointly by federal and provincial governments, by public housing agencies and, in some cases, by municipalities. Operating losses and the amortization over 50 years of the original capital cost are shared by the governments. The federal government share is normally 75% or 50%, depending on the specific program.

### Private Rent Supplement

The rent supplement program provides subsidy assistance to tenants in units owned and operated by private landlords. As in the public housing programs, rent is calculated based on tenant income. The cost of the subsidy is generally shared equally by the federal and provincial governments.

### Other Provincial Programs

Several provinces had a variety of programs in place to assist rental housing during the period 1976 to 1982 which were not tied to federal - provincial agreements. Most provided one-time grants or subsidies to developers or directly to tenants. Since the amounts were relatively small, the programs have been grouped together in this report.

### Residential Rehabilitation Assistance

Under this program the federal government makes forgivable loans to both owners and landlords to encourage the rehabilitation of existing housing. Only the loans to landlords for rental units are included in this report.

### Assisted Rental Program

This federal loan program, in place during the 1976 to 1978 period covered by this study replaced a previous grant program. The loan program was designed to encourage construction of rental housing by private developers. The developer signed an operating agreement with CMHC which specified rents and the return on an agreed equity investment. In return, CMHC provided interest free loans, normally for each of the first 10 years of the project life, to cover the difference between market rents and the costs of building and operating the project. The loans are secured by a second mortgage and normally become interest bearing 10 years after the project is built.

### Canada Rental Supply Plan

The federal Canada Rental Supply Plan, introduced in 1982, provides interest free loans to private rental projects. The loans are paid out at the time the building is constructed and are interest free for 15 years. After 15 years, they will bear interest at market rates.

### MURB (Multiple Unit Residential Buildings)

The MURB program was a "tax expenditure" program to promote the construction of rental housing. Tax expenditure programs can be defined as revenue forgone by governments. In their economic effect they are equivalent to the budgetary expenditure programs discussed above. Although this was a federal program, the cost is effectively shared by the provinces since their income tax receipts are also reduced. The MURB program was designed to encourage high income taxpayers to invest in the construction of qualifying multiple unit residential buildings. The deductability for income tax purposes of non-cash losses on MURB investments provided a cash return to the investor through reduced income taxes payable. The investor would normally consider both the expected cash return from reduced income tax payable and the expected cash return from the project itself in determining whether to make such an investment.

## CURRENT AND PRESENT VALUED EXPENDITURES

The expenditures are shown in this report in two forms:

- Current expenditure basis including the reported government budgetary expenditure and estimated tax expenditure each year.
- Present value of current and future expenditures relating to rental housing units committed each year.

The current expenditure basis generally represents the way governments recognize expenditures on the programs according to the accounting principles used by each government in preparing its financial statements. The present value approach is not normally used for financial statement purposes but is frequently used by financial analysts to compare programs or activities on a consistent basis.

Governments are not consistent in the ways they recognize, for financial statement purposes, the costs of various activities.

- Construction of highways and construction of public housing projects are both government activities. Highways and public housing projects are both normally built with the expectation that they will continue to have operating losses each year and will not generate revenue to apply against the principal and interest on funds borrowed to finance construction. The cost of building highways is normally recorded as an expense in the year of construction. The cost of building public housing projects is expensed in equal annual installments over the life of the projects, usually estimated as 50 years.
- The Assisted Rental Program (ARP) provides an example of the effect of present value on the timing of recognition of expenditures. The loan program generally provided interest free loan advances in each of the 10 years after the housing units were started. The last units in this program were started in 1978. However the cost of this program, as measured by current government expenditures, has continued to increase. The current expense recognized in 1983 was more than the total expense recognized in the three years 1976 to 1978 when units were actually built under the program.

The present value approach is designed to approximate the total government cost in a way which is consistent between programs. The present value approach provides consistency in valuing the cost to the governments in creating the unit, regardless of the way the expenditure is financed and regardless of the time at which the government chooses to recognize the expenditure.

## GENERAL ASSUMPTIONS

The estimates and assumptions used in this report, taken as a whole, are designed to be conservative and may tend to underestimate the actual expenditures.

This section discusses the major assumptions. Specific assumptions, estimates and sources of data for each program are discussed in the Statistical Appendix.

### Programs and Costs Excluded

- ° Municipal expenditures on rental housing have been excluded from this report although direct federal and provincial subsidies to municipal housing corporations or equivalent have been included. A number of municipalities have active programs. Excluding these expenditures understates the total cost.
- ° Most Government administration costs, including the costs of rent review programs, have been excluded.
- ° Possible losses of CMHC and provincial mortgage insurance operations on rental housing have been excluded.
- ° A number of tax expenditures which apply to real estate and construction in general rather than rental housing specifically have been excluded. Examples include:
  - Lower rate of Federal Sales Tax on building materials.
  - Deferral of income tax from the deductability of "soft costs" (and Capital Cost Allowance in excess of depreciation by some taxpayers) on non-MURB properties.
  - ° Present value costs have been calculated only for the major federal and shared federal-provincial programs. Several provinces had other programs in place during 1976-82 which most frequently involved one-time grants and subsidies. Excluding these minor programs understates the present value cost. These programs are included in the current expenditure basis figures.

### Timing of Expenditures

- ° Some provincial housing agencies report results based on a fiscal year ended March 31 while CMHC and other provincial agencies report on a calendar year basis. Reported results for periods ending March 31 have been treated as if they applied to the previous calendar year. This may slightly change the results between years but does not significantly affect the overall results.

- For all programs, the present value cost has been shown in the year that the units were reported as committed or approved by CMHC. Actual start and completion of the units may occur in other years. This assumption may distort results between years although it will not significantly affect overall costs. Costs may be understated since the inflation from the year of approval or commitment to the year of construction is ignored.
- All present value calculations are based on the full amount of the first year's revenue or expense and the assumption that future years' revenues and expenses are recognized at the beginning of the year.

#### Interest and Tax Rates

- A discount rate of 10% was used to calculate the present value of future government expenditures.
- An interest rate of 10% was used to estimate the cost to the government of borrowing to fund loan programs. This is less than the average cost of new government long term borrowing during the 1976-1982 period. The average yield from 1976 to 1983 on Government of Canada bonds with over 10 years to maturity was about 11.3%.
- In calculating the subsidy cost to bring mortgage rates down to a subsidized level, an average market mortgage interest rate of 12% has been assumed. Actual market rates on 5 year mortgages during the period 1978 to 1982 when these programs were in effect averaged about 14.5%.
- An average marginal federal and provincial personal income tax rate of 45% was used for individuals claiming MURB related deductions for tax purposes. A Department of Finance study estimated that over 65% of MURB related deductions in 1979 were claimed by individuals with total incomes over \$50,000. Individuals with total incomes over \$50,000 in 1979 would likely have been in the highest marginal tax bracket. Such individuals would have been subject to marginal rates averaging about 64% from 1976 to 1981, reduced to about 50% for 1982 and later years by the November 12, 1981 Budget.
- Uniform tax rates were assumed. No allowance was made for the effect of higher rates applicable in the early years of an investment when deductions would be claimed and lower rates applicable in later years when there would be income for tax purposes.

FEDERAL AND PROVINCIAL GOVERNMENT EXPENDITURES  
TO ASSIST AND PROMOTE RENTAL HOUSING IN CANADA

1976-1982

PART II - STATISTICAL APPENDIX

FEDERAL AND PROVINCIAL GOVERNMENT EXPENDITURES  
TO ASSIST AND PROMOTE RENTAL HOUSING IN CANADA

1976-1982

STATISTICAL APPENDIX

INTRODUCTION

This appendix includes:

- Specific Assumptions,
- Supporting Calculations,
- References to Information Sources,

to support the estimates of current expenditure basis and present value basis federal and provincial government expenditures on rental housing. The material in this appendix will be of interest primarily to housing analysts and researchers.

The summarization of data and the calculations have been prepared using LOTUS 1-2-3, a microcomputer based analysis-tool. The exhibits in this Appendix are actual LOTUS 1-2-3 spreadsheet printouts. LOTUS 1-2-3 maintains data internally to 10 or more significant digits and rounds to the user specified format in displays and printouts. This approach produces more accurate results but occasionally causes apparent rounding errors.

This appendix includes four main sections:

- Accumulation of the cost of budgetary rental housing programs on a current expenditure basis, referenced to sources in government reports, etc.
- Explanation of each major budgetary expenditure program with primary emphasis on the assumptions used to calculate the expenditure on a present value basis. Extracts of the calculation spreadsheets are also included for each program.
- Explanation of the MURB tax expenditure program including calculation of estimated costs on both a current expenditure and present value basis.
- Projected expenditures 1983-1990

## BUDGETARY PROGRAMS - CURRENT EXPENDITURE BASIS

The exhibits on the following pages document the accumulation of rental housing related costs on a current expenditure basis. Figures are accumulated for each province and the federal government at the individual program level. The comments reference each detailed number to the external source of the data or to an assumption or calculation.

The reference to external sources are normally self explanatory. The following codes are used:

- A = Annual Report of Canada Mortgage and Housing Corporation (CMHC) or the Provincial Ministry, Agency or Crown Corporation responsible for Housing.
- C = Statistical Appendix to the Report entitled "Future Fiscal Arrangements for Housing in Canada" dated July 1981 and prepared by Clayton Research Associates Ltd. Much of the data in the Clayton report was taken from questionnaire responses completed by federal and provincial agencies.
- E = Estimated as equal to the prior year's expenditure when no better or more up-to-date data was available.
- NP = No Program reported by the Province for that year.

The detailed numbers are summarized by program, by province, all provinces together and federal and provincial totals.

C = STATISTICAL ADDENDUM TO THE REPORT ENTITLED "FUTURE FISCAL ARRANGEMENTS FOR HOUSING IN CANADA" - JULY 1981.  
 NP = NO PROGRAM EXISTS.  
 A = PROVINCIAL ANNUAL REPORTS.  
 E = ESTIMATED BASED ON ASSUMPTION THAT CURRENT YEAR EQUALS PREVIOUS YEAR.  
 (000'S)

	Year						
	1976	1977	1978	1979	1980	1981	1982
<b>NEWFOUNDLAND</b>							
NON-PROFIT AND COOPERATIVE	NP	NP	NP	NP	NP	NP	NP
TOTAL	0	0	0	0	0	0	0
PUBLIC HOUSING							
PUBLIC HOUSING SECTION 40	732 C - TABLE 10-5	818 C - TABLE 10-5	882 C - TABLE 10-5	1180 C - TABLE 10-5	1716 C - TABLE 10-5	2120 C - TABLE 10-5	2120 E - 1982=1981
PUBLIC HOUSING SECTION 43	740 C - TABLE 10-5	1170 C - TABLE 10-5	1582 C - TABLE 10-5	1937 C - TABLE 10-5	2131 C - TABLE 10-5	2261 C - TABLE 10-5	2261 E - 1982=1981
ECONOMIC RENTAL HOUSING	350 C - TABLE 10-5	450 C - TABLE 10-5	600 C - TABLE 10-5	1075 C - TABLE 10-5	861 C - TABLE 10-5	962 C - TABLE 10-5	962 E - 1982=1981
TOTAL	1822	2438	3064	4192	4708	5343	5343
RENT SUPPLEMENT							
RENT SUPPLEMENT SECTION 44	0 C - TABLE 10-5	92 C - TABLE 10-5	229 C - TABLE 10-5	303 C - TABLE 10-5	361 C - TABLE 10-5	438 C - TABLE 10-5	438 E - 1982=1981
TOTAL	0	92	229	303	361	438	438
<b>P.E.I.</b>							
NON-PROFIT AND COOPERATIVE							
NON-PROFIT SUPPLEMENT	0 C - TABLE 9-5	0 C - TABLE 9-5	80 C - TABLE 9-5	80 E - 1982=1981			
TOTAL	0	0	0	0	0	80	80
PUBLIC HOUSING							
SEN. CITIZENS - SEC. 40 & 43	380 C - TABLE 9-5	340 C - TABLE 9-5	334 C - TABLE 9-5	326 C - TABLE 9-5	328 C - TABLE 9-5	417 C - TABLE 9-5	417 E - 1982=1981
PUBLIC HOUSING - SEC. 40	50 C - TABLE 9-5	70 C - TABLE 9-5	80 C - TABLE 9-5	90 C - TABLE 9-5	100 C - TABLE 9-5	122 C - TABLE 9-5	122 E - 1982=1981
TOTAL	430	410	414	416	428	539	539
RENT SUPPLEMENT	NP	NP	NP	NP	NP	NP	NP
TOTAL	0	0	0	0	0	0	0
<b>NOVA SCOTIA</b>							
NON-PROFIT AND COOPERATIVE	NP	NP	NP	NP	NP	NP	NP
TOTAL	0	0	0	0	0	0	0
PUBLIC HOUSING							
PUBLIC HOUSING - SEC. 40	942 C - TABLE 8-6 50/50 FED/PROV SPLIT	1201 C - TABLE 8-6 50/50 FED/PROV SPLIT	1452 C - TABLE 8-6 50/50 FED/PROV SPLIT	446 C - TABLE 8-6 50/50 FED/PROV SPLIT	479 C - TABLE 8-6 50/50 FED/PROV SPLIT	479 E - 1981=1980	479 E - 1982=1981
PUBLIC HOUSING - SEC. 44	1761 C - TABLE 8-6 75/25 FED/PROV SPLIT	2128 C - TABLE 8-6 75/25 FED/PROV SPLIT	2434 C - TABLE 8-6 75/25 FED/PROV SPLIT	2944 C - TABLE 8-6 75/25 FED/PROV SPLIT OF RURAL AND REMOTE	3227 C - TABLE 8-6 75/25 FED/PROV SPLIT OF RURAL AND REMOTE	3227 E - 1981=1980	3227 E - 1982=1981
TOTAL	2703	3329	3886	3390	3706	3706	3706
RENT SUPPLEMENT	NP	NP	NP	NP	NP	NP	NP
TOTAL	0	0	0	0	0	0	0
<b>NEW BRUNSWICK</b>							
NON-PROFIT AND COOPERATIVE	NP	NP	NP	NP	NP	NP	NP
TOTAL	0	0	0	0	0	0	0
PUBLIC HOUSING							
PUBLIC HOUSING - SEC. 40	280 C - TABLE 7-6 75/25 FED/PROV SPLIT	312 C - TABLE 7-6 75/25 FED/PROV SPLIT	383 C - TABLE 7-6 75/25 FED/PROV SPLIT	267 C - TABLE 7-6 75/25 FED/PROV SPLIT	1583 C - TABLE 7-6 75/25 FED/PROV SPLIT	1583 E - 1981=1980	1583 E - 1982=1980
PUBLIC HOUSING - SEC. 44	2128 C - TABLE 7-6 50/50 FED/PROV SPLIT	3124 C - TABLE 7-6 50/50 FED/PROV SPLIT	3671 C - TABLE 7-6 50/50 FED/PROV SPLIT	4150 C - TABLE 7-6 50/50 FED/PROV SPLIT	4358 C - TABLE 7-6 50/50 FED/PROV SPLIT	4358 E - 1981=1980	4358 E - 1982=1980
TOTAL	2408	3436	4054	4420	3941	3941	3941
RENT SUPPLEMENT	NP	NP	NP	NP	NP	NP	NP
RENT SUPPLEMENT							
TOTAL	0	0	143	514	541	482	482
A - N.B. 78-79 ANN.RPT.p14-							
TOTAL	0	0	143	514	541	482	482

## QUEBEC

## NON-PROFIT AND COOPERATIVE

	NP	NP	NP	NP	NP	NP	NP	NP	NP	
TOTAL	0	0	0	0	0	0	0	0	0	
PUBLIC HOUSING										
PUBLIC HOUSING - SEC. 40	201	C - TABLE 6-6 75/25 FED/PROV SPLIT	550	C - TABLE 6-6 75/25 FED/PROV SPLIT	403	C - TABLE 6-6 75/25 FED/PROV SPLIT	488	C - TABLE 6-6 75/25 FED/PROV SPLIT	407	C - TABLE 6-6 75/25 FED/PROV SPLIT
PUBLIC HOUSING - SEC. 44	15397	C - TABLE 6-6 50/50 FED/PROV SPLIT	17407	C - TABLE 6-6 50/50 FED/PROV SPLIT	19585	C - TABLE 6-6 50/50 FED/PROV SPLIT	32708	C - TABLE 6-6 50/50 FED/PROV SPLIT	34112	C - TABLE 6-6 50/50 FED/PROV SPLIT
TOTAL	15598		17957		19986		33196		34519	
RENT SUPPLEMENT										
RENT SUPPLEMENT	0	C - TABLE 6-5	0	C - TABLE 6-5	0	C - TABLE 6-5	647	C - TABLE 6-5	3347	C - TABLE 6-5
TOTAL	0		0		0		647		3347	

## ONTARIO

NON-PROFIT AND COOPERATIVE										
CSCP NON-PROFIT MUNICIP NON-PROF. INCENTIVE	0	C - TABLE 5-5	0	C - TABLE 5-5	0	C - TABLE 5-5	0	C - TABLE 5-5	11680	C - TABLE 5-5
	0	C - TABLE 5-5	0	C - TABLE 5-5	0	C - TABLE 5-5	0	C - TABLE 5-5	600	C - TABLE 5-5
TOTAL	0		0		0		0		11680	
PUBLIC HOUSING										
PUBLIC & RURAL HOUSING	70685	C - TABLE 5-5	80599	C - TABLE 5-5	92238	C - TABLE 5-5	104021	C - TABLE 5-5	129825	C - TABLE 5-5
TOTAL	70685		80599		92238		104021		129825	
RENT SUPPLEMENT		REP. AS PUB. HSING BY ONTARIO		REP. AS PUB. HSING BY ONTARIO		REP. AS PUB. HSING BY ONTARIO		REP. AS PUB. HSING BY ONTARIO		REP. AS PUB. HSING BY ONTARIO
TOTAL	0		0		0		0		0	
OTHER										
RENT REDUCTION GRANT	534	C - TABLE 5-5	1754	C - TABLE 5-5	2967	C - TABLE 5-5	4703	C - TABLE 5-5	6500	C - TABLE 5-5
RENT CONSTRUCTION GRANT	0	C - TABLE 5-5	0	C - TABLE 5-5	618	C - TABLE 5-5	3125	C - TABLE 5-5	4991	C - TABLE 5-5
TOTAL	534		1754		3585		7828		11491	
									11260	
										10242

## MANITOBA

NON-PROFIT AND COOPERATIVE										
NON-PROFIT HOUSING E& I.P.H.	NP	NP	NP	NP	NP	NP	NP	NP	NP	
	193	A - 1977/78 p20	191	A - 1977/78 p20	211	A - 1978/79 p18	172	A - 1980/81 p22	535	A - 1980/81 p22
	NOTE: YEAR ENDS HAVE BEEN ADJUSTED BACK ONE YEAR TO REFLECT MARCH 31 YEAR END.		191		211		172		535	
TOTAL	193								208	
PUBLIC HOUSING										
PUBLIC HOUSING SEC. 40 & 43	6723	A - 1977/78 p20	10096	A - 1977/78 p20	13184	A - 1978/79 p18	14831	A - 1980/81 p22	17930	A - 1980/81 p22
	NOTE: YEAR ENDS HAVE BEEN ADJUSTED BACK ONE YEAR TO REFLECT MARCH 31 YEAR END.		10096		13184		14831		17608	
TOTAL	6723								17608	
RENT SUPPLEMENT										
SAFER76-79 (INCL SEC 40&43)	NP	NP	NP	NP	NP	NP	292	A-1980/81 p22 (ELDERLY RENTERS ONLY)	2820	A - 1980/81 p22
	NOTE: YEAR ENDS HAVE BEEN ADJUSTED BACK ONE YEAR TO REFLECT MARCH 31 YEAR END.		10096		13184		14831		17608	
TOTAL	0		0		0		292		2820	
	193	A - 1980/81 p22	172	A - 1980/81 p22	535	A - 1980/81 p22	208	A - 1981/82 p23	708	E - 1982=1981
									208	
	916		741		741		916		916	

## SASKATCHEWAN

NON-PROFIT AND COOPERATIVE										
PUBLIC NON-PROFIT SUBSIDIES	0	C - TABLE 3-5	0	C - TABLE 3-5	0	C - TABLE 3-5	30	C - TABLE 3-5	240	C - TABLE 3-5
NON-PROFIT SR. CITIZEN	1224	C - TABLE 3-5	714	C - TABLE 3-5	1063	C - TABLE 3-5	980	C - TABLE 3-5	810	C - TABLE 3-5
	NOTE: DATA IN PROVINCIAL ANN. RPTS. DOES NOT CORRESPOND TO DATA IN CLAYTON REPORT - THE CLAYTON DATA HAS BEEN USED.		714		1063		1010		1050	
TOTAL	1224								1440	
PUBLIC HOUSING										
PUBLIC HOUSING	651	C - TABLE 3-5	1169	C - TABLE 3-5	1241	C - TABLE 3-5	2410	C - TABLE 3-5	2900	C - TABLE 3-5
	1169		1169		1241		2410		2900	
TOTAL	651		1169		1241		2410		4160	
RENT SUPPLEMENT										
	NP	NP	NP	NP	NP	NP	NP	NP	NP	
TOTAL	0		0		0		0		0	

## ALBERTA

NON-PROFIT AND COOPERATIVE										NP					
TOTAL		0	NP	0	NP	0	NP	0	NP	0	NP				
PUBLIC HOUSING															
COMMUNITY HOUSING SEC 40	196	C - TABLE 2-5		152	C - TABLE 2-5		192	C - TABLE 2-5	175	C - TABLE 2-5	217	C - TABLE 2-5			
COMMUNITY HOUSING SEC 44	1740	C - TABLE 2-5		1607	C - TABLE 2-5		3540	C - TABLE 2-5	4647	C - TABLE 2-5	7506	C - TABLE 2-5			
SEN. SELF-CONTAINED(SEC 44)	1418	C - TABLE 2-5		2852	C - TABLE 2-5		5798	C - TABLE 2-5	7887	C - TABLE 2-5	13514	C - TABLE 2-5			
ACCESS HOUSING SEC 44	0	C - TABLE 2-5		0	C - TABLE 2-5		0	C - TABLE 2-5	68	C - TABLE 2-5	262	C - TABLE 2-5			
UNIQUE HOME ASSISTANCE	0	C - TABLE 2-5		0	C - TABLE 2-5		0	C - TABLE 2-5	338	C - TABLE 2-5	500	C - TABLE 2-5			
RENTAL INVESTMENT INCENTIVE	0	C - TABLE 2-5		0	C - TABLE 2-5		0	C - TABLE 2-5	0	C - TABLE 2-5	5000	C - TABLE 2-5			
TOTAL	3354		4811		9530		13107		27019		34957				
RENT SUPPLEMENT		NP		NP		NP		NP		NP		NP			
TOTAL	0		0		0		0		0		0				
OTHER	CORE HOUSING INCENTIVE	0	NP	272	C - TABLE 2-5	1519	C - TABLE 2-5	2009	C - TABLE 2-5	5810	A - ALTA. 1982 ANN. REP. Pg. 19	13984	A - ALTA. 1983 ANN. REP. Pg. 17	43372	A - ALTA. 1983 ANN. REP. Pg. 17

## BRITISH COLUMBIA

NON-PROFIT AND COOPERATIVE										NP	NP	NP	NP	NP	NP	NP	NP
TOTAL		0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP
PUBLIC HOUSING																	
PUBLIC HOUSING SEC 40	2176	C - TABLE 1-5		2225	C - TABLE 1-5		2727	C - TABLE 1-5	2856	C - TABLE 1-5	3026	C - TABLE 1-5	3347	C - TABLE 1-5	3347	E - 1982=1981	
TOTAL	2176		2225		2727		2856		3026		3347		3347				
RENT SUPPLEMENT																	
SEC 44.1(A) ON SEC 43	2335	C - TABLE 1-5		3646	C - TABLE 1-5		3935	C - TABLE 1-5	3778	C - TABLE 1-5	7951	C - TABLE 1-5	7536	C - TABLE 1-5	7536	E - 1982=1981	
SEC 44.1(A) ON ARP	6	C - TABLE 1-5		363	C - TABLE 1-5		1004	C - TABLE 1-5	1102	C - TABLE 1-5	2020	C - TABLE 1-5	2100	C - TABLE 1-5	2100	E - 1982=1981	
SEC 44.1(A) ON HANDICAPPED	0	C - TABLE 1-5		0	C - TABLE 1-5		0	C - TABLE 1-5	0	C - TABLE 1-5	45	C - TABLE 1-5	263	C - TABLE 1-5	283	E - 1982=1981	
SEC 44.1(A) ON NON-PROFIT	1151	C - TABLE 1-5		1165	C - TABLE 1-5		2304	C - TABLE 1-5	2660	C - TABLE 1-5	3122	C - TABLE 1-5	2914	C - TABLE 1-5	2914	E - 1982=1981	
SAFER	0	C - TABLE 1-5		2126	C - TABLE 1-5		7963	C - TABLE 1-5	8271	C - TABLE 1-5	7700	C - TABLE 1-5	9000	C - TABLE 1-5	9000	E - 1982=1981	
TOTAL	3492		7301		15206		15811		20838		21813		21813				
OTHER																	
ASSISTED RENTAL PROGRAM	0	C - TABLE 1-5		578	C - TABLE 1-5		4166	C - TABLE 1-5	9500	C - TABLE 1-5	7900	C - TABLE 1-5	6900	C - TABLE 1-5	6900	E - 1982=1981	
MUNICIPAL INCENTIVE GRANTS	0	C - TABLE 1-5		2233	C - TABLE 1-5		6281	C - TABLE 1-5	1460	C - TABLE 1-5	1165	C - TABLE 1-5	200	C - TABLE 1-5	200	E - 1982=1981	
TOTAL	0		2811		10447		10960		9485		7100		7100				

## YUKON

NON-PROFIT AND COOPERATIVE										NP	NP	NP	NP	NP	NP	NP	NP
TOTAL		0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP
PUBLIC HOUSING																	
SENIOR CITIZ. HOUSING SEC 44	370	DATA COLLECTED VIA PHONE CALL.		419	DATA COLLECTED VIA PHONE CALL.		375	DATA COLLECTED VIA PHONE CALL.	408	A - YUKON ANN.RPT. 1980/B1p12	440	A - YUKON ANN.RPT. 1980/B1p12	519	A - YUKON ANN.RPT. 1981/B2p10	519	E - 1982=1981	
LOW RENTAL FAMILY HOUSING	80	A - 1977/78 p16		144	A - 1977/78 p16		166	A - 1979/80 p14	23	A - YUKON ANN.RPT. 1980/B1p12	31	A - YUKON ANN.RPT. 1980/B1p12	25	A - YUKON ANN.RPT. 1981/B2p10	25	E - 1982=1981	
TOTAL	450		563		541		431		471		544		96		96		96
RENT SUPPLEMENT																	
RENT SUPPLEMENT SEC 44	65	A - 1977/78 p16		99	A - 1977/78 p16		108	A - 1979/80 p14	86	A - YUKON ANN.RPT. 1980/B1p12	87	A - YUKON ANN.RPT. 1980/B1p12	96	A - YUKON ANN.RPT. 1981/B2p10	96	E - 1982=1981	
TOTAL	65		99		108		86		87		96		96		96		96

## N.W.T.

NON-PROFIT AND COOPERATIVE										NP	NP	NP	NP	NP	NP	NP	NP
TOTAL		0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP	0	NP
PUBLIC HOUSING																	
PUB. & SEN. CITIZ. HOUSING	7737	A - 1976 p11		11399	A - 1977 p14		11134	A - N.W.T. ANN. RPT. 1978p12	14420	A - N.W.T. ANN. RPT. 1979p11	18943	A - N.W.T. ANN. RPT. 1980p10	22966	A - N.W.T. ANN. RPT. 1981p11	13467	A - N.W.T. ANN. RPT. 1982/3, EST. DUE TO CLOSING ACCT. PERL.	
TOTAL	7737		11399		11134		14420		18943		22966		13467				
RENT SUPPLEMENT																	
TOTAL	0		0		0		0		0		0		0		0		0

PROVINCIAL BUDGETARY EXPENDITURE SUMMARY

NON-PROFIT AND COOPERATIVE	1417	905	1274	1595	7031	14716	4212
PUBLIC HOUSING	114737	138438	162001	197690	249416	274882	267662
KENT SUPPLEMENT	3557	7492	15686	17653	27994	30049	30049
OTHER	534	4837	15551	21597	26386	34344	60714
TOTAL	120245	151648	194512	238535	310827	353971	362637

FEDERAL BUDGETARY EXPENDITURE SUMMARY

NON-PROFIT AND COOPERATIVE	21000	CWIC INTERNAL DATA,APPROX=ANN. REP.	31300	CWIC INTERNAL DATA,APPROX=ANN. REP.	31700	CWIC INTERNAL DATA,APPROX=ANN. REP.	26700	CWIC INTERNAL DATA,APPROX=ANN. REP.	35700	CWIC INTERNAL DATA,APPROX=ANN. REP.	74400	CWIC INTERNAL DATA,APPROX=ANN. REP.	196500	CWIC INTERNAL DATA,APPROX=ANN. REP.
PUBLIC HOUSING	106700	CWIC 1983 ANN. REPORT p65	141100	CWIC 1983 ANN. REPORT p65	179000	CWIC 1983 ANN. REPORT p65	265400	CWIC 1983 ANN. REPORT p65	262700	CWIC 1983 ANN. REPORT p65	320300	CWIC 1983 ANN. REPORT p65	399100	CWIC 1983 ANN. REPORT p65
KENT SUPPLEMENT	4900	CWIC INTERNAL DATA,TREASURER'S DIR.	7400	CWIC INTERNAL DATA,TREASURER'S DIR.	9200	CWIC INTERNAL DATA,TREASURER'S DIR.	9100	CWIC INTERNAL DATA,TREASURER'S DIR.	14800	CWIC INTERNAL DATA,TREASURER'S DIR.	16200	CWIC INTERNAL DATA,TREASURER'S DIR.	16500	CWIC INTERNAL DATA,TREASURER'S DIR.
RENTAL RAP	7900	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	19500	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	25100	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	16500	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	11500	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	13700	CWIC CALC,60% OF LOAN 1stYR,40% 2nd	17600	CWIC CALC,60% OF LOAN 1stYR,40% 2nd
ASSISTED RENTAL PROG.	3500	CWIC 1983 ANN. REPORT p65	9900	CWIC 1983 ANN. REPORT p65	17700	CWIC 1983 ANN. REPORT p65	19500	CWIC 1983 ANN. REPORT p65	25000	CWIC 1983 ANN. REPORT p65	29700	CWIC 1983 ANN. REPORT p65	32300	CWIC 1983 ANN. REPORT p65
CANADA RENTAL SUPPLY PLAN	NP	NP	1200	CWIC 1983 ANN. REPORT p65										
TOTAL FEDERAL	144000		208200		262700		337200		349700		454300		662000	

TAX EXPENDITURE SUMMARY

NURB PROGRAM													
PROVINCIAL SHARE	33000		47000		51000		63000		73000		81000		90000
FEDERAL SHARE	66000		87000		108000		128000		146000		153000		183000
TOTAL	99000		130000		161000		191000		219000		246000		273000
TOTAL PROVINCIAL SHARE	15345		194646		247512		301535		383827		434971		452437
TOTAL FEDERAL SHARE	210000		295200		370700		465200		495700		619300		666200
TOTAL CURRENT BUDGETARY AND TAX EXPENDITURES	343245		489864		618212		766735		879527		1054271		1298837

## BUDGETARY PROGRAMS - PRESENT VALUE BASIS

This section includes an explanation of each of the major federal-provincial budgetary rental housing programs along with a discussion of the assumptions and estimates used to calculate the present value cost of each program. Extracts of the LOTUS 1-2-3 spreadsheets are included to document the calculations. The budgetary programs included are:

- Non-Profit and Cooperative Housing
- Public Housing
- Private Rent Supplement Program
- Assisted Rental Program
- Canada Rental Supply Plan
- Residential Rehabilitation Assistance Program

### Assumptions and Estimates

The General Assumptions section of the Report discusses a number of key assumptions and estimates which apply to some or all of the budgetary expenditure programs. Specific estimates and assumptions relating to each program are discussed within each program section. The development of cost estimates for the capital cost of social housing units and the annual operating loss before amortization of principal and interest are discussed below.

### Capital Cost of Units

The average capital cost, excluding mortgage insurance fee, of units built under the NHA Section 56.1 non-profit and cooperative housing program in 1983 was \$51,770 according to an unpublished CMHC program performance analysis. Two assumptions were made to estimate the capital cost of units in this and other programs in other years:

- The cost in prior years was deflated by the Statistics Canada Residential Building Materials and Wage Rates Index. (Source: CMHC Canadian Housing Statistics - 1983)
- The average per unit capital cost in other programs was assumed to be the same as in the Section 56.1 program. CMHC indicated that this was a reasonable assumption since the same types of construction standards and size and cost guidelines applied to all programs. The proportion of larger, more expensive family units and smaller senior citizens units remained fairly stable over the years.

### Annual Operating Losses

Operating losses are defined in this section as the amount by which operating expenses (utilities, maintenance and repairs, property administration, municipal taxes, etc.) exceed rental income. Amortization of principal and interest on the original capital cost of the units is not included.

An unpublished CMHC analysis of the operating budgets covering 188,352 units of the public housing program in place at the end of 1981 was used to establish a weighted average annual operating loss of \$1,032 per unit in 1981. The present value of future operating losses was estimated using the following assumptions:

- Annual operating losses were projected for earlier and later years at a 5% inflation rate. The underlying assumption is that both the rent calculated as a percentage of income, and the operating expenses increase at 5% and thus the net difference increases at 5%. Since inflation was greater than 5% in the 1976 to 1981 period and operating costs probably increased faster than the rent-gearied-to-income during this period, this may result in an overestimate of the operating losses in the years prior to 1981. However, the 5% inflation rate probably gives a conservative estimate of losses over the expected 50 year life of the units.
- Annual losses were projected to continue (increasing at 5% per year) for 50 years after the unit was committed. Many of the units have provisions under the federal-provincial agreements allowing for adjustments in the basis for subsidies 15, 25, 35 and 45 years after commitment. There is no indication of what adjustments, if any, will be made. The present value approach tends to make the total cost relatively insensitive to costs in later years of the project life.
- The cost of future losses was discounted to a present value using a 10% discount factor.
- The calculated present value factor for a 50 year series at 5% inflation and 10% discount rate is 19.85091.

CALCULATION OF CAPITAL COST OF SOCIAL HOUSING UNITS BY YEAR

ASSUMPTION : UNITS BUILT UNDER SECTION 56.1 ARE REPRESENTATIVE OF SOCIAL HOUSING UNITS BUILT DURING THE PERIOD 1976-1982

AVERAGE CAPITAL COST EXCLUDING MORTGAGE INSURANCE FEE  
OF UNITS BUILT UNDER SECTION 56.1 DURING 1983 \$51,770

SOURCE : UNPUBLISHED CMHC PROGRAM PERFORMANCE ANALYSIS

YEAR	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
STATISTICS CANADA RESIDENTIAL BUILDING MATERIALS AND WAGE RATES INDEX	172.8	193.9	206.2	219.5	236.3	258.5	282.5	316.2	332.0	348.6	366.0	384.3	403.6	423.7	444.7
% INCREASE IN RMBMW INDEX ASSUMED % INCREASE 1984-1990	12%	6%	6%	8%	9%	9%	12%	5%	5%	5%	5%	5%	5%	5%	5%
CALCULATED SOCIAL HOUSING CAPITAL COST* PER UNIT	\$28,292	\$31,745	\$33,760	\$35,939	\$39,683	\$42,323	\$46,252	\$51,770	\$54,359	\$57,075	\$59,350	\$62,927	\$66,075	\$69,377	\$72,845

CALCULATION OF OPERATING LOSS ON RENT-SEARED-TO-INCOME-UNITS

ASSUMPTION : BASED ON 1981 STATISTICS USING 5% INFLATION FOR BOTH RENTS AND OPERATING COSTS IN EARLIER AND LATER YEARS

SOURCE : UNPUBLISHED CMHC ANALYSIS OF PUBLIC HOUSING OPERATING BUDGETS  
ALL SECTION 40 & 44 UNITS IN PLACE AT END OF 1981

TYPE OF UNIT	NUMBER OF UNITS	TOTAL MONTHLY LOSS	MONTHLY AMORTIZATION	ANNUAL LOSS BEFORE AMORTIZATION	ANNUAL AMORTIZATION										
SECTION 40 REGULAR FAMILY	18596	\$227.05	\$114.54	\$1,349.88	\$1,374.72										
SECTION 40 REGULAR SENIOR CITIZENS	14201	\$234.34	\$109.96	\$1,532.80	\$2,279.52										
SECTION 44 REGULAR FAMILY	79013	\$267.17	\$145.16	\$1,684.12	\$1,741.72										
SECTION 44 REGULAR SENIOR CITIZENS	78462	\$201.44	\$151.27	\$602.04	\$1,615.24										
	188352		\$143.02	\$1,032.26	\$1,775.19										
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CALCULATED ANNUAL LOSS BEFORE AMORTIZATION AT 5% INFLATION	\$809	\$849	\$892	\$935	\$983	\$1,032	\$1,084	\$1,138	\$1,195	\$1,255	\$1,317	\$1,383	\$1,452	\$1,523	\$1,601
PRESENT VALUE OF 50 YEARS LOSSES ASSUMING 5% INFLATION AND 10% DISCOUNT	\$16,050	\$16,050	\$17,701	\$18,594	\$19,515	\$20,491	\$21,515	\$22,592	\$23,721	\$24,307	\$25,155	\$27,450	\$30,353	\$33,270	\$37,252
CALCULATED SOCIAL HOUSING CAPITAL COST PER UNIT	\$28,292	\$31,745	\$33,760	\$35,939	\$39,683	\$42,323	\$46,252	\$51,770	\$54,359	\$57,075	\$59,350	\$62,927	\$66,075	\$69,377	\$72,845
TOTAL PRESENT VALUE COST PER UNIT	\$43,347	\$43,405	\$43,451	\$43,524	\$43,594	\$43,664	\$43,733	\$43,793	\$43,853	\$43,913	\$43,973	\$44,033	\$44,093	\$44,153	\$44,213

## NON-PROFIT AND COOPERATIVE HOUSING

These programs support rental housing owned and operated by non-profit organizations and cooperatives. There were two separate non-profit housing programs in place during the study period, "old" non-profit from 1976 to 1978, and "new" non profit from 1978 to 1982.

### Old Non-Profit

The old non-profit housing under Sections 15.1 and 34.18 of the National Housing Act included the following components:

- Federal government grant of 10% of total cost,
- Federal government CMHC mortgage at 8% for 50 years covering the remaining 90% of the total cost,
- Rent subsidy on approximately 25% of the units in each project covering the difference between rent/geared-to-income and operating costs, including amortization of principal and interest.

The cost of the old non-profit program on a current expenditure basis is based on CMHC and provincially reported budgetary expenditures. Present value expenditures are based on the following assumptions:

- Expenditure recognized in the year of CMHC commitment.

Commitments by year as reported by CMHC were:

<u>YEAR</u>	<u>UNITS</u>	<u>LOAN AMOUNT (\$MILLIONS)</u>
1976	10,093	\$338
1977	6,273	226
1978	3,125	159

- Expenditure based on sum of:
  - 10% grant based on 10% of Loan commitment in the year
  - Subsidy of mortgage to 8% from assumed federal government average borrowing cost of 10% on remaining 90% of Loan commitment,
  - Rental subsidy on 25% of the units.
- Rental subsidy on the assumed 25% of units which are subsidized, calculated as the present value at a 10% discount rate on the sum of:
  - Capital cost of these units calculated as 25% of the loan commitment amount (representing the total capital cost) less 25% of the federal grant. Assume, as in public housing, that there is no recovery of capital costs.

- Assumed rental loss per unit before amortization equivalent to rent/geared-to-income units of public housing (\$1,032 in 1981) indexed to increase by 5% per year.
- ° The cost of the rental subsidy is split 50% federal and 50% provincial. The other components are federal.

#### New Non-Profit

The new non-profit and cooperative program under section 56.1 of the National Housing Act provides contributions to public and private non-profit corporations and cooperatives which operate rental housing projects for persons of low and moderate incomes. Up to 100 per cent of the approved capital costs of a project are financed by private lenders, usually insured by CMHC under the NHA.

The contribution provided to the projects is equivalent to the difference between monthly amortization costs of the total project costs at the market rate of interest, and the payments required if the rate of interest were set at two per cent, on a 100 per cent loan over a 35 year term. The assistance is initially used to bridge the gap between economic rent and market rent with the surplus being used to assist tenants who cannot afford market rents. The program encourages the maximum mixture of rent-to-income tenants and market rent tenants.

The cost of the new non-profit program on a current expenditure basis is based on CMHC reported budgetary expenditures. Present value expenditures are based on the following assumptions:

- ° Expenditure recognized in the year of CMHC commitment.  
Units committed by year as reported by CMHC were:
 

- 1978	2,965
- 1979	16,642
- 1980	24,907
- 1981	22,243
- 1982	22,778
- ° The amount of the mortgage subsidized was the number of units times the calculated capital cost per unit (\$51,770 in 1983 discounted by the Statistics Canada Residential Building Materials and Wage Rates Index in earlier years.)
- ° The assumed market interest rate for mortgages was 12%, implying a subsidy equivalent to the interest on a 10% mortgage. This is conservative since the average rate on 5 year mortgages from 1978 to 1982 was about 14.5%.
- ° A discount rate of 10% was used to obtain a present value of the interest subsidy payments.

CALCULATION OF PRESENT VALUE COST OF SECTION 15.1 AND 34.3 NON-PROFIT AND COOPERATIVE HOUSING PROGRAMS

	1976	1977	1978	1979	1980	1981	1982
UNITS COMMITTED (SOURCE: CMHC)	10093	6273	3125				
LOANS COMMITTED ( SOURCE: CMHC ) \$ MILLIONS	\$358	\$226	\$159				
PRESENT VALUE OF SUBSIDY FROM 10% ASSUMED MARKET RATE TO 8% ON 90% OF MORTGAGE FACTOR : 0.185943	\$56	\$38	\$27				
FEDERAL GRANT OF 10% OF MORTGAGE	\$34	\$23	\$16				
UNITS SUBJECT TO SECTION 44 RENT SUPPLEMENT ASSUME 25%	2523	1568	781				
 CALCULATED ANNUAL LOSS BEFORE AMORTIZATION AT 5% INFLATION	\$807	\$849	\$892				
PRESENT VALUE OF 50 YEARS LOSSES ASSUMING 5% INFLATION AND 10% DISCOUNT	\$16,056	\$16,853	\$17,701				
CALCULATED PRESENT VALUE LOSS BEFORE AMORTIZATION ON RENT SUPPLEMENT UNITS \$ MILLIONS	\$41	\$26	\$14				
CALCULATED PRESENT VALUE OF AMORTIZATION AT 25% OF MORTGAGE ON ALL UNITS	\$76	\$51	\$36				
TOTAL PRESENT VALUE OF RENT SUPPLEMENT PROVINCIAL SHARE 50% FEDERAL SHARE 50%	\$115	\$77	\$50				
TOTAL PRESENT VALUE FEDERAL COST SECTION 15.1 AND 34.3 NON-PROFIT AND COOPERATIVE	\$148	\$99	\$67				

CALCULATION OF PRESENT VALUE COST OF SECTION 56.1 NON-PROFIT AND COOPERATIVE HOUSING PROGRAM

	1976	1977	1978	1979	1980	1981	1982
UNITS COMMITTED ( SOURCE: CMHC) ASSUMPTION : UNITS COMMITTED IN YRS. 1984-90 = 22,500 UNITS		2965	16642	24907	22243	22778	
CALCULATED SOCIAL HOUSING CAPITAL COST PER UNIT		\$33,750	\$35,938	\$39,689	\$42,323	\$46,252	
CALCULATED VALUE OF 100% MORTGAGES ( \$ MILLIONS )		\$100	\$598	\$964	\$941	\$1,054	
PRESENT VALUE OF DISCOUNT FROM ASSUMED 10% MARKET RATE TO 8% RATE ( \$ MILLIONS ) FACTOR : 0.947024		\$95	\$566	\$913	\$892	\$998	
TOTAL PRESENT VALUE PROVINCIAL COST ALL NON-PROFIT AND COOPERATIVE		\$58	\$39	\$25			
TOTAL PRESENT VALUE FEDERAL COST ALL NON-PROFIT AND COOPERATIVE		\$148	\$99	\$162	\$988	\$913	\$892

## PUBLIC HOUSING

Public housing refers to rental housing built under Sections 40 and 43 of the National Housing Act (NHA).

Under Section 40 of the NHA, CMHC and the government of a province may enter into an agreement for the construction or acquisition of a public housing project. Capital costs are shared 75%/25% by the federal and provincial governments respectively. The province, in turn, may request that municipalities participate in its 25 per cent share. Amortization of the costs are spread over a 50 year period with interest rates set at the current long term borrowing rate of the federal and provincial governments. Operating losses are cost-shared on the same basis as the original project costs. The projects are managed by housing authorities appointed by the province with federal approval. Rents charged to the occupants are based on a rent-geared-to-income scale as specified in the Federal/Provincial Operating Agreement, and generally equal 25 per cent or less of the household's income.

Under Section 43 of the NHA, CMHC makes long term loans to provinces, municipalities, or public housing agencies for the construction or acquisition of a public housing project. Upon execution of a Federal/Provincial Operating Agreement, the federal and provincial governments share the operating losses on a 50/50 basis under Section 44 of the NHA. The projects are owned and operated by the province, municipality or public housing agency. Rents charged to the occupants are based on provincial rent-geared-to-income scales. Operating losses are calculated on the basis of the revenues that would be collected if the federal rent-to-income scale were used.

The average rents on these public housing units are such that they do not cover operating costs (utilities, maintenance, municipal tax or equivalent, etc.) and make no contribution to principal and interest repayment.

The cost of public housing on a current expenditure basis is based on provincial and CMHC reported budgetary expenditures. Present value expenditures are based on the following assumptions:

- Expenditure recognized in the year of CMHC commitment.  
Units committed by year as reported by CMHC were:

<u>YEAR</u>	<u>SECTION 40</u>	<u>SECTION 43/44</u>
1976	1660	9668
1977	1517	7505
1978	1868	14898
1979	1525	3045
1980	1331	2911
1981	1367	1616
1982	1210	1550

- Expenditure on a present value basis calculated as the sum of:
  - 100% of the total cost of the unit, since there is no expectation of recovery of this cost through rentals.
  - Present value of future operating losses before amortization.
- The cost was allocated 75% to the federal government for section 40 units and 50% to the federal government for section 43/44 units with the remaining cost allocated to the provinces.

CALCULATION OF FEDERAL AND PROVINCIAL PRESENT VALUE COST OF PUBLIC HOUSING

YEAR	1976	1977	1978	1979	1980	1981	1982
SECTION 40 UNITS COMMITTED	1650	1517	1863	1525	1331	1367	1210
SOURCE : CMHC							
SECTION 40 PRESENT VALUE COST (\$ MILLIONS)	\$74	\$74	\$96	\$83	\$77	\$86	\$82
PROVINCIAL SHARE 25%	\$18	\$18	\$24	\$21	\$19	\$21	\$20
FEDERAL SHARE 75%	\$55	\$55	\$72	\$62	\$58	\$64	\$61
SECTION 44 UNITS COMMITTED	9668	7505	14878	3045	2911	1816	1550
SOURCE: CMHC							
SECTION 43/44 PRESENT VALUE COST (\$ MILLIONS)	\$429	\$365	\$767	\$166	\$169	\$102	\$105
PROVINCIAL SHARE 50%	\$214	\$182	\$383	\$83	\$85	\$51	\$53
FEDERAL SHARE 50%	\$214	\$182	\$383	\$83	\$85	\$51	\$53
PRESENT VALUE PROVINCIAL PUBLIC HOUSING COST	\$233	\$201	\$407	\$104	\$104	\$72	\$73
PRESENT VALUE FEDERAL PUBLIC HOUSING COST	\$270	\$238	\$455	\$145	\$143	\$115	\$114
TOTAL PRESENT VALUE PUBLIC HOUSING COST	\$502	\$439	\$863	\$249	\$247	\$187	\$187

## PRIVATE RENT SUPPLEMENT PROGRAM

Under Section 44(1)(a) of the NHA, the Rent Supplement Program provides for subsidy assistance to tenants living in units owned and operated by private landlords. It is designed as an alternative to the regular Section 44 public housing program particularly in municipalities where the production of family public housing has encountered resistance.

The program is designed to increase the housing stock available to low income individuals, families and senior citizens by utilizing private market accommodation. The provinces using the program will not allow more than 25 per cent of the units in any designated project to be certified, except in senior citizen projects, in scattered family units and in projects of 80 units or less, (in which up to 20 subsidized units are allowed). In theory, this guarantees the integration of low income households in both the project and neighbourhood.

As the active partner, the province enters into lease agreements with individual landlords which designate the units, specify the market rent and set the length of agreement. The province also supplies the tenants from local public housing waiting lists.

Rents charged to these households are according to a rent-to-income scale. This may be the federal graduated rental scale or a provincial scale, although federal subsidies are calculated using the scale generating the lowest subsidies. Subsidy contributions are shared 50/50 by federal and provincial governments. Prior to January, 1979, the maximum subsidy term on any one unit was 15 years. Since that date the maximum term has been set at 35 years, though provincial agencies may negotiate shorter terms, usually three to five years, with provision for renewal.

The cost of the Rent Supplement Program on a current expenditure basis is based on CMHC and provincially reported budgetary expenditures. Present value expenditures are based on the following assumptions:

- ° The average subsidy per unit, for all units in place at the end of 1982 was \$3,600, based on an unpublished CMHC analysis. This is higher than the calculated annual loss for public housing units (including amortization) used for public housing units in 1982. The Rent Supplement program includes a high proportion of more expensive family units.
- ° The present value of the subsidy was calculated based on a 5% inflation factor and a five year subsidy. This is a conservative assumption since the maximum subsidy period was 15 years for units approved from 1976 to 1978 and 35 years for units approved from 1979 to 1982. The five year estimate was used since most agreements with landlords were for about 5 years although the agreements are normally renewable.

- The cost was recognized in the year of CMHC commitment.  
Units committed by year as reported by CMHC were:
  - 1976 2637 units
  - 1977 2880 units
  - 1978 5396 units
  - 1979 4022 units
  - 1980 1250 units
  - 1981 734 units
  - 1982 1293 units
- The costs were allocated 50% to the federal government and 50% to the provinces.

CALCULATION OF ANNUAL RENTAL LOSS ON SECTION 44 RENT SUPPLEMENT UNITS

AVERAGE SUBSIDY ON PRIVATE RENTAL SUBSIDY UNITS \$ 3,600 IN 1980 ( SOURCE: UNPUBLISHED CMHC DATA)

	1976	1977	1978	1979	1980	1981	1982
CALCULATED ANNUAL LOSS AT 5% INFLATION	\$2,686	\$2,821	\$2,962	\$3,110	\$3,265	\$3,429	\$3,600

PRIVATE RENTAL SUBSIDY UNITS ARE NORMALLY CONTRACTED FOR A MINIMUM OF 5 YEARS WITH THE POSSIBILITY OF EXTENSION  
TO BE CONSERVATIVE, ASSUME ONLY 5 YEARS LOSSES

PRESENT VALUE OF 5 YEARS LOSSES ASSUMING 5% INFLATION AND 10% DISCOUNT FACTOR : 4.743932	\$12,744	\$13,331	\$14,050	\$14,753	\$15,490	\$16,265	\$17,079
UNITS COMMITTED ( SOURCE: CMHC)	2637	2880	3396	4022	4250	734	1293
TOTAL PRESENT VALUE OF PRIVATE RENTAL SUBSIDY (\$ MILLIONS)	\$34	\$39	\$76	\$59	\$13	\$12	\$22
PROVINCIAL SHARE 50%	\$17	\$19	\$38	\$30	\$10	\$6	\$11
FEDERAL SHARE 50%	\$17	\$19	\$38	\$30	\$10	\$6	\$11

## ASSISTED RENTAL PROGRAM

The Assisted Rental Program (ARP) is designed to encourage the development of rental housing by private developers. The program, which was in effect for commitments from 1976 to 1978, provided for annual interest free loans for the first 10 years of a project, secured by second mortgages. The loans were designed to supplement rental income where a gap existed between the cost of building and operating the project and the market rents that could be charged. The program is conditional upon an operating agreement between the builder and CMHC with predetermined rental levels and a specified return on an agreed equity investment.

The program generally provided for a loan of \$1200 per unit in the first year, reducing to \$120 in the 10th year. The loan was to begin bearing interest at market rates in the 11th year. The actual loans have been higher than expected because net rental losses as calculated under the operating agreements have been higher than expected. An additional \$83 million was committed in 1981 and 1982. This may result in some of the loans remaining interest free beyond 10 years. To be conservative, this extra cost, which cannot yet be estimated, is not included in the present value calculations.

The federal cost of ARP on a current expenditure basis is based on CMHC reported budgetary expenditures, measured as interest foregone. The present value expenditures were based on the following assumptions:

- ° Expenditure recognized in the year of CMHC commitment.  
Units committed by year as reported by CMHC were:
  - 1976 25,231 units
  - 1977 56,905 units
  - 1978 17,483 units
- ° Assume 85% of commitments resulted in a housing start (estimated by CMHC by comparing internal data on commitments and starts).
- ° Loans were as originally expected, \$1200 in the first year, declining to \$120 in the tenth year and became interest bearing in the 11th year. This is conservative since loan advances have been higher than expected.
- ° 10% cost of money on foregone interest and 10% discount rate to calculate present value.
- ° Calculated present value cost per unit is \$2,799.

CALCULATION OF PRESENT VALUE OF ARP INTEREST FREE LOANS

ASSUMPTIONS

- 1 ADVANCE OF \$1000 IN FIRST YEAR, DECLINING BY \$100 EACH YEAR FOR 10 YEARS  
PER SEASONAL PAYDAY ESTIMATE. ACTUAL ADVANCES HAVE BEEN HIGHER
- 2 INTEREST FREE FOR 10 YEARS THEN AT MARKET RATES. ACTUAL INTEREST FREE PERIOD MAY BE LONGER.
- 3 85% OF COMMITMENTS RESULTED IN AT START IN SOURCE (OHC ESTIMATE)

	1976	1977	1978	1979	1980	1981	1982
UNITS COMMITTED (SOURCE: QMHCI)	25231	56305	17483				
CALCULATED RESULTING STARTS AT 267	21444	46737	14881				
CALCULATED PRESENT VALUE OF FORESEEABLE INTEREST ON ADVANCES ( \$ MILLIONS)	\$50	\$105	\$42				
FACTOR : 2799.644							

### CANADA RENTAL SUPPLY PLAN (CRSP)

The Canada Rental Supply Plan provides for interest free loans to private rental projects. The loans are paid out at the time the building is constructed and are interest free for 15 years. After 15 years, they will bear interest at market rates.

The cost to the federal government of CRSP on a current expenditure basis is based on CMHC reported budgetary expenditures, calculated as interest forgone. The present value cost of the foregone interest on the CRSP loans was calculated based on the following assumptions:

- ° Expenditure recognized in the year of CMHC loan commitment. CMHC reported approval of 10,744 units in 1982 and a loan commitment of \$118 million.
- ° Present value of foregone interest calculated assuming a 10% interest rate and 10% discount rate for 15 years. The calculated present value cost is \$.836668 per dollar of loan committed.

CALCULATION OF CANADA RENTAL SUPPLY PLAN

	1976	1977	1978	1979	1980	1981	1982
UNITS COMMITTED (SOURCE : CMHC)							10657
LOANS COMMITTED ( \$ MILLIONS ) (SOURCE : CMHC)							\$113
PRESENT VALUE OF FORGONE INTEREST (\$MILLIONS) AT 10% INTEREST AND 10% DISCOUNT RATE FOR 15 YEARS							\$59

## RESIDENTIAL REHABILITATION ASSISTANCE PROGRAM (RRAP)

Under the Residential Rehabilitation Assistance Program (RRAP), the federal government makes loans to both owners and landlords to encourage the preservation of existing housing stock and the extension of its useful life. Only the loans for rental units are considered here. For rental units, forgiveness of the loans is conditional on maximum rental limits. CMHC experience has been that a substantial amount of the loans are forgiven.

The present value cost of the rental portion of RRAP is based on the total amount of the loans approved each year. The following figures for rental units and loans on those units are based on internal CMHC data since published figures combine rental and other commitments.

YEAR	UNITS	LOANS (\$ Millions)
1976	4337	\$11
1977	9175	24
1978	10163	26
1979	5076	10
1980	8461	12
1981	7789	15
1982	8674	20

The current expenditures were calculated by CMHC assuming that 60% of the loan was forgiven in the year of approval and the remaining 40% was forgiven the following year.

CALCULATION OF RENTAL PORTION OF RESIDENTIAL REHABILITATION ASSISTANCE PROGRAM (RRAP)

	1976	1977	1978	1979	1980	1981	1982
RENTAL UNITS COMMITTED ( SOURCE: CMHC)	4837	9175	10163	8976	8461	7789	8674
FOREGIVABLE LOANS (\$ MILLIONS)	\$11	\$24	\$25	\$19	\$12	\$15	\$20
SOURCE : CMHC							
ASSUMPTION FOR YRS. 1984-90							
YEAR	1	2	3	4	5		
AVG. FOREGIVENESS PER UNIT (\$2,530/UNIT) SOURCE:CMHC							
AVG. FORGIVENESS PER YEAR	506	506	506	506	506		
PV OF AVG. FOREGIVENESS PER UNIT		\$2,110					

## MURB TAX EXPENDITURE PROGRAM

The MURB program was a "tax expenditure" program to promote the construction of rental housing. Tax expenditures can be defined as revenue forgone by governments to encourage certain economic and social activities or to provide relief from special economic hardships. In their economic effect they are equivalent to budgetary expenditure programs. The key difference is that the benefit of most tax expenditure programs is restricted to individuals and corporations who would otherwise be taxable and the amount of the benefit depends on the marginal tax rate which would otherwise apply. The federal government published "Government of Canada Tax Expenditure Account" in 1979 and "Analysis of Federal Tax Expenditures for Individuals" in 1981. These studies discuss the concept and provide examples.

### The MURB Program

In 1972, Regulation 1100(11) (re rental properties) was introduced whereby Capital Cost Allowance (CCA) from rental properties could not be used to create or increase a loss from rental properties. The Multiple Unit Residential Building (MURB) concept, introduced in 1974, restored the ability to use CCA to create or increase losses for certain quantifying rental properties.

To qualify as a MURB, a building required Canada Mortgage and Housing Corporation (CMHC) certification and construction (i.e. installation of footings) had to commence between November 18, 1974 and December 31, 1979 or between October 29, 1980 and December 31, 1981. Also, in excess of 80% of the floor space of the buildings had to be dedicated to providing self-contained domestic establishments and related recreation parking, service and storage areas.

There were two types of MURBs until 1980. These included frame buildings (Class 32) such as a typical townhouse project which could be depreciated on a 10% basis provided the footings of the buildings were commenced prior to January 1, 1978. The "grandfathering" provision to terminate the 10% depreciation rate did not include an undue delay provision as was included in the 1981 soft costs legislation. As a result, there was reputed to be significant warehousing of "grandfathered" projects well into the 1980 taxation year. The non-frame buildings such as brick structures, walk-up apartment buildings and high-rise structures are all depreciated on a 5% declining balance basis (Class 31).

Not all units certified as MURBs became rental properties which resulted in tax expenditures. Some units were never built, others were owner-occupied as condominiums and others are owned by non-tax-paying entities which do not use the tax benefits.

### Previous Studies of MURB Tax Expenditures

Previous studies of the tax expenditure costs of the MURB program have concentrated on the deductability of CCA to create or increase rental losses since this is the main difference, for tax purposes, between a MURB and a non-MURB unit.

- The Department of Finance, in "Analysis of Federal Tax Expenditures for Individuals", calculated that the amount of class 31 and 32 CCA claimed by individuals in 1979 was approximately \$156 million. The study also calculated that over 65% of this CCA was claimed by individuals with total income over \$50,000 in 1979. Assuming an average combined provincial and federal marginal tax rate of 45% (compared to the average top marginal rate in 1979 of about 64%), the tax expenditure would be approximately \$70 million. This does not consider any class 31 or 32 CCA claimed by corporate taxpayers.
- A Clayton Research Associates Ltd. study for CMHC estimated that there were 195,000 MURB starts (actual rental units, not including owner-occupied units etc.) from 1974 to 1981. Using a 10% discount rate and a 50% marginal tax rate, Clayton estimated the present value of tax expenditures on MURB associated CCA to be approximately \$900 million. This estimate assumed no sale of the property and thus no recapture of CCA.

### Approach Used to Estimate MURB Tax Expenditures

In this report, the evaluation of the tax expenditure aspects of the MURB program is based on the fundamental observation that the program was designed to and has been successful in attracting high marginal rate individual taxpayers to invest in the construction of rental units. Accordingly, all of the tax consequences to the investor, not just the deductability of CCA were included. The tax consequences to the investor of a MURB project included in the study were:

- Deductability of CCA,
- Recapture of CCA upon sale of the project,
- Deductability of "soft costs",
- Recapture of "soft costs" (taxed as a capital gain) upon sale,
- Capital gain on sale,
- Deductability of interest on money borrowed to finance the investment,
- Deductability of operating losses and/or income on operating profits.

A high marginal rate investor views a MURB as a "tax sheltered" investment. The investor considers both the cash returns from the property itself and the cash returns from reduced income taxes payable. A logical investor would consider this investment and compare it against other investments (stocks, bonds, non-MURB real estate, etc.) on a net-present value basis. The "tax shelter" comes from the ability to deduct cash and non-cash losses from other income for tax purposes in the early years of project life. If the project is successful, it will have operating profits in future years and eventually recapture of CCA and capital gains (half of which are taxed) when the property is sold. However, on a present value basis, the tax paid on income for tax purposes in later years are usually outweighed by the tax saved on losses for tax purposes in the early years.

All other factors being equal, the tax savings to individual investors in the early years allow a project to attract capital even though it would not otherwise be viable. In particular, the same project might not be viable from the viewpoint of a taxpayer whose primary business is rental real estate and would be able to claim the same deductions whether or not the project was a MURB. Such a corporation might have other activities which already created a loss for tax purposes. The value of tax benefits only claimable in future years would be less valuable than the same benefits claimable by high marginal rate individuals in the current year.

#### Model of Individual MURB Projects

The approach taken in this study was to examine MURB projects from an investor's viewpoint. Although there is no such thing as a typical MURB project, four publicly syndicated MURB projects from different promoters and different taxation years were used as examples. Models were created of each project from the investors viewpoint using the assumptions in the prospectus. The ending value of the project was adjusted to create a 10% after tax net present value return to the investor. The tax savings to the investor (tax expenditures to the government) based on these assumptions were then analyzed. The following were the key assumptions:

The projections in MURB prospectuses were assumed to be reliable. Where the prospectus provided only a 10 year-projection, the same assumptions were extended for 20 years. A promoter would, if anything, be motivated to be optimistic in estimating profitability and cash flows. A review of recent prospectuses suggests that, although there are considerable differences between projects, the original projections of the promoters were, on average, slightly optimistic in the early years of the projects. If the estimates prove to be optimistic, then the tax expenditure will be greater than estimated.

- Projects were assumed to be held by the original investor for 20 years and sold in the 21st year. MURBs have been sold as long term investments and are not generally readily marketable.
- The assumed annual increase in the value of the project over total original cost was estimated to provide the investor with a total net compounded after tax cash return on investment of 10%. For an investor in a 50% marginal tax bracket, this would be equivalent to a 20% pre-tax return. If the project actually realizes a lower return than this projection then the tax expenditure will be greater than estimated.
- 45% combined provincial and federal marginal tax rates were used. This is very conservative because average maximum marginal rates were about 64% from 1979 to 1981 and about 50% in 1982. Also, no consideration was given to the probability, due to the reduction in top rates in 1982, that permanent tax savings will be achieved by claiming losses at higher tax rates than may be in effect when income is realized for tax purposes.

The spreadsheet extract on the following page shows one of the four publicly syndicated projects analysed. This limited partnership offered and subscribed in 1983 included 1130 limited partnership units and resulted in the construction of 162 housing units. The estimates of receipts, disbursements, mortgage interest, operating profit, CCA, interest on note and total tax loss for the entire project for the years 1983-2002 are taken from the prospectus.

The section of the spreadsheet headed "PER INVESTMENT UNIT" looks at the project from the viewpoint of the investor. On an after tax basis he makes an initial investment with a Net Present Value (NPV) of \$5,000. He receives an NPV of \$3,273 from the cash returns on the operation of the project (beginning in 1996 according to the prospectus) and from the eventual proceeds on sale of the project. He receives a NPV cash return from tax reductions in the early years and payable in later years of \$1,734. His total NPV position is  $(-5000 + 3273 + 1734)$  \$7 which is assumed equal to zero. Since the discount factor used in calculating NPV is 10%, this is equal to a 10% after tax return on the investment.

The project was assumed to be sold at the beginning of 2003, 20 years after the initial investment. The "ANNUAL VALUE INCREMENT" of 0.014 means that the total value of the project, including all costs to the investor, from initial investment (assumed December 31, 1983) to the date of sale (assumed January 1, 2003) was assumed to increase by 1.4% per year. The figures in 2003 for the total project represent the CCA recapture (assumed 100% taxable), the recapture of 50% of the soft costs (assumed treated as a capital gain) and 50% of the capital gain over the original total cost.

OPERATING &amp; FINANCIAL STATEMENT

YEAR : 1993

MANUFACTURING UNITS : 1121

HOUSING UNITS : 1321

LOCATION : ONTARIO

TOTAL SUBSCRIPTION : \$5,450,000

TOTAL PROJECT	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
CASH RECEIPTS	667933	1037762	1158531	1237730	1325843	1420143	1520144	1627322	1742211	1855370	1997411	2133932	2230737	2453577	2628162	2815411	3018261	3231714	3442834			
OPERATING DISBURSEMENTS	172107	263538	316350	338124	361418	386548	413086	441863	472188	504936	540001	577851	617767	660841	706979	756495	809360	866096	926638			
MORTGAGE INTEREST PAID	869491	1103500	1174136	1157673	1138304	1117177	1092389	1063979	1031416	994093	951315	902284	846934	781569	707839	623212	526215	415036	287630			
OPERATING PROFIT	0	-313585	-444054	-381945	-286617	-173376	-93377	-14219	-121740	-236807	-366541	-506055	-655147	-824536	-1011667	-1213245	-1435793	-1650586	-1850582	-2249766	0	
C.C.A.	268337	547491	507500	470519	437741	408126	381351	357829	335362	313741	297512	280570	264770	250115	235449	223574	211734	200470	189907	179762	-6386345	
SOFT COSTS	2154172	261998	124646	126646	126646	124645	41509														-1646529	
INTEREST ON NOTE	395500	395500	198380	199380																		-2179108
CAPITAL GAINS																						
TOTAL TAX LOSS	-2480059	-1819551	-1472069	-1126309	-1017487	-706547	-506716	-343197	-214222	-77337	68209	225565	394377	576821	774618	989571	1224089	1450216	1760675	2053404	10213981	
TAX LOSS / UNIT	-2195	-1610	-1303	-997	-900	-625	-449	-304	-190	-68	51	200	349	510	685	875	1085	1310	1556	1830	9039	
TAX LOSS / TOTAL COST %	-17	-13	-10	-8	-7	-5	-4	-2	-1	-1	0	2	3	4	5	7	9	10	12	14	71	
TAX EXPENDITURES %	57	42	34	26	23	16	12	8	5	2	-2	-5	-9	-13	-18	-23	-29	-34	-40	-48	-235	
TAX RATE	0.45																					

## PER INVESTMENT UNIT

## NPV OF TAX EXPENDITURES

OPERATING PROFIT	647
C.C.A.	-990
SOFT COSTS	-1132
CAPITAL GAINS	129
INTEREST ON NOTE	-387
<b>TOTAL</b>	<b>-1734</b>

CASH RETURNS		295
NPV OF CASH RETURNS	3273	
NPV OF INVESTMENT	-5009	
<b>TOTAL NPV</b>	<b>7</b>	

ANNUAL VALUE INCREMENT	0.014
ORIGINAL FULL COST	12757
VALUE AT 20YRS.	18614
PRINCIPAL AT 20YRS.	1323

CASH ON SALE	15291
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## PER HOUSING UNIT

TAX COST / UNIT	-12094
TAX COST AS A % OF PROJECT COST	14
<b>TOTAL COST PER HOUSING UNIT</b>	<b>88934</b>

Under the heading "PER HOUSING UNIT", the NPV tax cost per housing unit was calculated as \$12,094. The NPV tax cost was calculated as 14% of the total cost per housing unit of \$88,984.

The line "TAX EXPENDITURES %" is calculated as the tax loss per investment unit in each year multiplied by the tax rate as a percent of the NPV tax cost per investment unit. (In 1983, this is  $2195 \times .45/1734 = 57\%$ ). This ratio is not meaningful in itself but is useful in projecting the tax cost each year once the present value tax cost has been estimated.

The same type of model was developed for three other publicly syndicated MURB projects by other developers in other years. These are not shown in the Statistical Appendix.

For the four projects, the average calculated NPV tax cost was 15.96% of the total project cost. The average "TAX EXPENDITURE %" ratio for the four projects was:

YEAR %	1 38	2 34	3 25	4 21	5 18	6 14	7 10	8 8	9 7	10 5
YEAR %	11 7	12 5	13 3	14 1	15 -1	16 -4	17 -6	18 -9	19 -12	20 -15

### Projection of Present Value Tax Cost of All MURBs

The present value tax cost of all MURBs was estimated using the following assumptions:

- Non-syndicated MURBs and other syndicated MURBs were assumed to follow a similar pattern to the four sample syndicated MURBs evaluated in detail. Business judgement suggests that syndicated MURBs in a particular year would have offered similar benefits to be competitive.
- Present value costs were recognized in the year of CMHC certification. Units certified by year as reported by CMHC were:

<u>YEAR</u>	<u>UNITS</u>
1975	8517 (not included in present value calculation)
1976	35219
1977	82265
1978	80089
1979	76550
1980	0
1981	44382
Total	327022

- Approximately 60% of units certified as MURBs were treated as MURBs for tax purposes. The rest were assumed to be never completed, owner-occupied, owned by non-tax paying entities or owned by entities whose principal business is the construction and operation of rental properties and could thus obtain similar tax benefits without the MURB program.
- An average cost per MURB unit constructed of \$63,000 in 1982 was used, projected to other years using the Statistics Canada Residential Building Materials and Wage Rates Index. The figure of \$63,000 was arrived at through discussion with CMHC and others. It is one third higher than the estimate for social housing units of \$46,252 in 1982. The difference could be attributed to the higher soft costs included in MURB projects for rent guarantees, agent's commission on the fund raising etc. which would not be part of the cost of social housing units and the possibility that MURB units are larger, are located on more expensive land and include more high cost amenities than typical social housing units.
- A net present value tax expenditure of 15% of total cost was used in projecting the sample to the total population of MURBS. This is conservative since the average of the four sample projects was 15.96%.

- The cost was allocated 2/3 to the federal government and 1/3 to the provinces, approximately the ratio of federal to provincial income tax rates.

#### **Projection of Current Tax Cost of All MURBs**

Unlike the budgetary expenditure programs discussed earlier in the Statistical Appendix, the current cost of tax expenditure programs cannot be taken directly from government reports. The following additional assumptions were used in estimating current tax costs in each year:

- The approximately 195,000 units assumed to be MURBs for tax purposes were distributed across the years 1974 to 1984 to approximate the year each unit was first claimed for tax purposes. On the spreadsheet this is shown as "AS BUILT".
- The average ratio of tax cost per year to NPV tax cost (calculated for the four sample projects) was multiplied by the calculated NPV tax cost of units built in a year to project the current year tax cost in the year first claimed and later years.
- The total tax cost in a year is the sum of the tax cost in the year of units first claimed in the year and first claimed in earlier years.

#### **Comparison to Department of Finance Study**

As previously mentioned, the Department of Finance in "Analysis of Federal Tax Expenditures for Individuals" calculated from actual tax returns that approximately \$156 million of MURB related Class 31 and 32 CCA was claimed by individuals in the 1979 taxation year. As a test of the model used in this report, we calculated the projected amount of Class 31 and 32 CCA claimed in 1979 in the model. The following assumptions were used:

- 64% of the total project cost was assumed to be Class 31 and 32 assets. This was the building cost as a percent of the total cost for the 4 sample projects. The remainder of the cost is land, soft costs and appliances.
- One-half of the assets were assumed to be class 31 (10%) and one-half class 32 (5%) giving an average CCA rate of 7.5%.

Based on the same approach used to calculate the current tax cost, the 1979 class 31 and 32 CCA claimed was calculated at \$150 million. This slightly less than the Department of Finance figure of \$156 million. This lends support to the assumptions of units built and cost of units used in creating the model.

TAX EXPENDITURES OF M.U.R.B PROGRAM 1974 - 1982

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984 TOTAL
CALCULATION BASED ON YR. BUILT											
M.U.R.B. UNITS APPROVED	0	8517	35219	82265	80089	76550	0	44382	0	0	327022
* C.R.B. UNITS "BUILT"	15000	20000	20000	20000	20000	20000	20000	20000	20000	15000	5000 195000
ASSUMED 1982 AVG. COST/UNIT											63000
RESIDENTIAL BUILDING MATERIAL											
AND WAGE RATE INDEX	134.7	144.0	160.5	175.5	192.0	211.4	222.7	244.3	258.0	284.8	300.0
SOURCE : C.D.B. HOUSING STATISTICS 1983 TABLE 94, 1984 EST.											
CALC. AVERAGE FULL COST / UNIT	32892	35163	39192	42855	46884	51621	54380	59655	63000	69544	73256
TOTAL VALUE OF MURB UNITS BUILT	493	703	784	857	938	1032	1059	1193	1260	1043	386
BUILDING PORTION FOR C.C.A. (64 %)	296	422	470	514	563	619	653	715	755	626	220
AVG. PV TAX COST AS %	15.98%										
ASSUMED PV TAX COST %	15.00%										
PV TAX COST (MILLIONS)	74	105	118	129	141	155	163	179	189	156	55 0
CALCULATION BASED ON YR. APPROVED											
M.U.R.B. UNITS APPROVED	0	8517	35219	82265	80089	76550	0	44382	0	0	327022
60 % OF UNITS APPROVED	0	5110	21131	49359	48053	45930	0	26629	0	0	196213
CALC. AVERAGE FULL COST / UNIT	32892	35163	39192	42855	46884	51621	54380	59655	63000	69544	73256
TOTAL VALUE OF MURB UNITS BUILT	0	180	828	2115	2253	2371	0	1559	0	0	0
BUILDING PORTION FOR C.C.A. (64 %)	0	108	497	1269	1352	1423	0	953	0	0	0
ASSUMED PV TAX COST %	15.00%										
PV TAX COST (MILLIONS)	0	27	124	317	338	356	0	238	0	0	6
PROVINCIAL SHARE ( 33%)	0	9	41	105	112	117	0	79	0	0	0
FEDERAL SHARE (67%)	0	18	83	213	226	239	0	160	0	0	0

	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	
AVG. CURRENT YR. TAX EXPENDITURE (\$)	39	34	25	21	16	14	10	9	7	5	7	5	3	1	-1	-4	-8	-9	-12	-15	-281
CURRENT TAX EXPENDITURES BY YEAR 1974 - 1990																					
YR. BUILT	PV TAX \$000	C.C.P. CLASS-31,32																			
			1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990		
UNITS - 1974	4	18	25	25	18	15	15	10	7	6	5	4	3	3	2	1	-3	-5			
UNITS - 1975	105	35	42	35	23	19	15	11	9	7	5	3	5	3	1	-2	-4				
UNITS - 1976	115	28		45	40	25	24	21	16	12	10	6	5	3	1	-1	-2				
UNITS - 1977	129	19			49	34	32	26	23	18	13	10	8	6	5	4	1				
UNITS - 1978	141	42				53	48	35	29	25	19	14	12	9	7	7	4				
UNITS - 1979	155					54	52	39	32	28	21	16	13	10	7	10	7				
UNITS - 1980	163						62	55	40	34	29	22	17	13	11	9	11				
UNITS - 1981	179							68	61	44	37	32	29	19	15	12	9				
UNITS - 1982	189								72	64	46	39	34	26	19	15	12				
UNITS - 1983	194									59	53	39	32	29	22	16	13				
UNITS - 1984	55																				
TOTAL ,CLASS - 31, 2		150																			
TOTAL TAX EXPENDITURES BY YEAR	28	55	99	130	181	191	219	246	273	281	229	187	150	120	92	63	45				
PROVINCIAL SHARE (33%)	9	21	33	43	53	63	72	81	90	93	76	61	49	40	30	22	15				
FEDERAL SHARE (67%)	19	44	55	67	103	126	146	163	183	193	154	123	100	83	61	45	31				

## PROJECTED EXPENDITURES 1983-1990

The basic approach to projecting expenditures for the years 1983 to 1990 was to use the same assumptions as in estimating the present value cost of the programs but to recognize the costs on a per year rather than present value basis. CMHC was able to provide the number of units committed under each program in 1983. The first set of calculations were done under the assumption that units continued to be committed after 1983 as follows:

- 22,500 units annually under the Section 56.1 Non-Profit and Cooperative program. This is slightly less than the average 22,857 units committed each year from 1980 to 1983.
- 2,000 units annually under the Public housing program, equally divided between Section 40 and Section 43 units. This is less than the average for prior years since CMHC plans to devote less resources to this program.
- 315 units annually under the Section 44.1(a) Private Rent Supplement program. This estimate was obtained from CMHC and represents a planned decrease in the resources devoted to this program.

A second set of calculations were then performed with the only difference being the elimination of the projected units from 1984 to 1990. The additional assumptions, beyond those discussed earlier in this Statistical Appendix and in the General Assumptions section of the Report were:

### Capital Cost Per Unit

- The capital cost of new units was assumed to increase by 5% per year after 1983. The average annual increase from 1976 to 1983 was 9%. The calculated unit cost per unit is shown earlier in the Statistical Appendix.

### Annual Losses

- The average annual amortization of principal and interest on public housing units was calculated as \$1,776 based on 1981 CMHC data. This was assumed constant.
- The average annual loss before amortization on public housing units was calculated as \$1,032 in 1981 from CMHC data and projected to increase 5% per year.
- The average annual loss on private rent supplement units was calculated as \$3,600 in 1982 and projected to increase by 5% per year.

### Mortgage Principal Repayment

- For simplicity, it was assumed that 1% of the previous year's principal was repaid each year. This is conservative since repayment is slower than this in the early years of typical blended payment mortgages. Most of the mortgages are in the early years. For example under 4% of the principal is paid off in the first ten years of a 10% 35 year mortgage or about 0.4% per year.

### Old Non-Profit and Cooperative

- CMHC provided estimates of a total 68319 units in place at the end of 1983, 12,111 of which were receiving a rent-geared-to-income subsidy.
- The average mortgage balance outstanding in 1983 for existing units was assumed as \$15,000. This reflects the fact that most of these units date from the early 1970's.

### New Non-Profit and Cooperative

- Assume that mortgages become outstanding in the year after commitment to reflect construction delays.

### Public Housing

- CMHC estimated 41,327 Section 40 units and 162,805 Section 43/44 units approved to the end of 1983.

### Private Rent Supplement

- Assume that the subsidy lasts 5 years beginning after the year of commitment.

### Residential Rehabilitation Assistance Program

- This program, which is not material to the totals, was excluded from the future years projection because there was no realistic basis for estimating future approvals.

### Assisted Rental Program

- No new assumptions required.

### Canada Rental Supply Plan

- Assume that the mortgages become outstanding in the year after commitment to reflect construction delays.

### MORB Program

- No new assumptions required.

### Comparison to Reported 1983 Figures

There is no reported expenditure for tax expenditure programs such as MURB. Provincial governments have not yet reported for 1983. However, it is possible to compare the projected figures for the federal share of budgetary expenditure programs to data reported by CMHC in its 1983 annual report as follows:

#### FEDERAL SHARE OF BUDGETARY PROGRAMS (\$ Millions)

	1983 Projected	1983 Reported
Non-Profit and Cooperative	\$399	\$380
Public Housing	328	393
Private Rent Supplement	24	23
Assisted Rental Program	46	36
Canada Rental Supply Plan	12	5
	-----	-----
	\$809	\$837

The totals are quite close. The fact that the projections underestimate the cost of the Public Housing program is probably due to the low 5% annual inflation estimate since 1981. The overestimation of the other programs is probably due to the assumption that the loan balance becomes outstanding in the year following commitment. The correct delay is probably about 18 months. This assumption would not significantly affect the total cost of the program but would shift the cost to later years.

CALCULATION OF PROJECTED CURRENT EXPENDITURES 1983 TO 1990

OLD NON-PROFIT AND COOPERATIVE

ASSUMPTIONS:

- : 58319 UNITS EXISTING AT END OF 1983, 12111 UNITS SUBJECT TO RENT SUBSIDY (SOURCE: CMHC)
- : AVERAGE MORTGAGE PRINCIPAL OUTSTANDING \$15000 PER UNIT AT END OF 1983
- : 1% OF OPENING PRINCIPAL PAID OFF EACH YEAR
- : FEDERAL SUBSIDY OF 2% OF MORTGAGE BALANCE, DIFFERENCE BETWEEN 3% AND ASSUMED 10% GOVT BORROWING COST
- : SHARED FEDERAL PROVINCIAL SUBSIDY ON 12111 RENT-TO-INCOME UNITS ASSUMED SAME AS PUBLIC HOUSING UNITS
- : SUM OF AMORTIZATION PLUS PRE-AMORTIZATION LOSS

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
TOTAL UNITS	68319	68319	68319	68319	68319	68319	68319	68319
MORTGAGE PER UNIT	\$15,000	\$14,850	\$14,702	\$14,554	\$14,409	\$14,265	\$14,122	\$13,981
TOTAL MORTGAGES (\$ MILLIONS)	\$1,025	\$1,015	\$1,004	\$994	\$984	\$975	\$965	\$955
COST OF 2% RATE SUBSIDY (\$ MILLIONS)	\$20	\$20	\$20	\$20	\$20	\$19	\$19	\$19
RENT-TO-INCOME UNITS	12111	12111	12111	12111	12111	12111	12111	12111
AMORTIZATION	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776
LOSS BEFORE AMORTIZATION	\$1,138	\$1,193	\$1,255	\$1,317	\$1,383	\$1,452	\$1,525	\$1,601
TOTAL LOSS PER UNIT	\$2,914	\$2,971	\$3,031	\$3,094	\$3,160	\$3,229	\$3,301	\$3,378
RENT-TO-INCOME SUBSIDY (\$ MILLIONS)	\$35	\$36	\$37	\$37	\$38	\$39	\$40	\$41
PROVINCIAL SHARE 50%	\$18	\$18	\$18	\$19	\$19	\$20	\$20	\$20
FEDERAL SHARE 50%	\$18	\$18	\$18	\$19	\$19	\$20	\$20	\$20

NEW NON-PROFIT AND COOPERATIVE

ASSUMPTIONS

- : FEDERAL COST IS 10% OF MORTGAGE BALANCE, DIFFERENCE BETWEEN 2% AND ASSUMED 12% MARKET RATE
- : FOR SIMPLICITY, ASSUME 1% OF OPENING PRINCIPAL BALANCE PAID OFF EACH YEAR
- : UNITS IN PLACE EQUALS SUM OF
- : 1979 TO 1982 UNITS PER CMHC
- : 21500 UNITS 1983 (CMHC INTERNAL DATA)
- : 22500 UNITS IN EACH OF 1984 TO 1990 (ESTIMATE BY CHBA)
- : UNIT CONSTRUCTION COST INCREASES 5% PER YEAR 1984 TO 1990 (AVERAGE 1979 TO 1983 WAS 9%)
- : MORTGAGES BECOME OUTSTANDING 1 YEAR AFTER APPROVAL TO RECOGNIZE CONSTRUCTION DELAY

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
UNITS APPROVED	21500	22500	22500	22500	22500	22500	22500	22500
UNIT COST	\$51,770	\$54,359	\$57,076	\$59,930	\$62,927	\$65,973	\$69,377	\$72,335
NEW MORTGAGES (\$ MILLIONS) COMMITTED	\$1,113	\$1,223	\$1,284	\$1,348	\$1,416	\$1,487	\$1,561	\$1,639
TOTAL MORTGAGES OUTSTANDING (\$ MILLIONS)	\$3,606	\$4,683	\$5,859	\$7,085	\$8,363	\$9,695	\$11,084	\$12,535
SUBSIDY COST 10% OF MORTGAGES (\$ MILLIONS)	\$361	\$468	\$586	\$709	\$836	\$969	\$1,108	\$1,253
TOTAL NON-PROFIT AND COOPERATIVE								
PROVINCIAL SHARE	\$18	\$18	\$18	\$19	\$19	\$20	\$20	\$20
FEDERAL SHARE	\$399	\$507	\$624	\$747	\$875	\$1,009	\$1,148	\$1,293
TOTAL	\$417	\$525	\$643	\$765	\$894	\$1,028	\$1,166	\$1,313

PUBLIC HOUSING

ASSUMPTIONS

: 141327 SECTION 40 UNITS AND 162905 SECTION 43/44 UNITS APPROVED TO END OF 1983 (SOURCE: CMHC INTERNAL DATA)  
 : 1000 SECTION 40 UNITS AND 1000 SECTION 43/44 UNITS APPROVED EACH YEAR 1984 TO 1990 (CMHC ESTIMATE)  
 : ANNUAL LOSS EQUALS SUM OF  
 : 1981 AVERAGE AMORTIZATION PER UNIT  
 : 1981 AVERAGE LOSS BEFORE AMORTIZATION, INCREASING BY 5% PER YEAR FOR INFLATION

SECTION 40 UNITS

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
NEW UNITS APPROVED		1000	1000	1000	1000	1000	1000	1000
CUMULATIVE UNITS	41327	42327	43327	44327	45327	46327	47327	48327
AMORTIZATION	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776
LOSS BEFORE AMORTIZATION	\$1,139	\$1,193	\$1,255	\$1,317	\$1,383	\$1,452	\$1,525	\$1,601
TOTAL LOSS PER UNIT	\$2,914	\$2,971	\$3,031	\$3,094	\$3,160	\$3,229	\$3,301	\$3,378
RENT-TO-INCOME SUBSIDY (\$ MILLIONS)	\$120	\$125	\$131	\$137	\$143	\$150	\$156	\$163
PROVINCIAL SHARE 25%	\$30	\$31	\$33	\$34	\$34	\$37	\$39	\$41
FEDERAL SHARE 75%	\$90	\$94	\$93	\$103	\$107	\$112	\$117	\$122

SECTION 43/44 UNITS

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
NEW UNITS APPROVED		1000	1000	1000	1000	1000	1000	1000
CUMULATIVE UNITS	162905	163805	164805	165805	166805	167805	168805	169805
AMORTIZATION	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776
LOSS BEFORE AMORTIZATION	\$1,139	\$1,193	\$1,255	\$1,317	\$1,383	\$1,452	\$1,525	\$1,601
TOTAL LOSS PER UNIT	\$2,914	\$2,971	\$3,031	\$3,094	\$3,160	\$3,229	\$3,301	\$3,378
RENT-TO-INCOME SUBSIDY (\$ MILLIONS)	\$474	\$487	\$500	\$513	\$527	\$542	\$557	\$574
PROVINCIAL SHARE 50%	\$237	\$243	\$250	\$256	\$264	\$271	\$279	\$287
FEDERAL SHARE 50%	\$237	\$243	\$250	\$256	\$264	\$271	\$279	\$287

TOTAL PUBLIC HOUSING

PROVINCIAL SHARE	\$267	\$275	\$283	\$291	\$299	\$308	\$318	\$328
FEDERAL SHARE	\$328	\$338	\$348	\$359	\$371	\$383	\$396	\$409
TOTAL	\$595	\$612	\$631	\$650	\$670	\$691	\$714	\$737

PRIVATE RENT SUPPLEMENT

ASSUMPTIONS

: SUBSIDY LASTS 5 YEARS AFTER YEAR OF APPROVAL (I.E. UNITS UNDER SUBSIDY IN 1983 = UNITS APPROVED 1978 TO 1982)  
 : 1983 UNITS APPROVED 1200 (SOURCE: CMHC INTERNAL ESTIMATE)  
 : 1984 TO 1990 UNITS APPROVED PER YEAR 315 (SOURCE: CMHC INTERNAL BUDGET)  
 : SUBSIDY PER UNIT \$3600 IN 1982 (SOURCE: CMHC INTERNAL DATA), INCREASING 5% PER YEAR FOR INFLATION

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
UNITS APPROVED	1200	315	315	315	315	315	315	315
UNITS COVERED BY SUBSIDY	1200	8472	4792	3857	3438	2460	1575	1575
SUBSIDY PER UNIT	\$3,720	\$3,969	\$4,127	\$4,376	\$4,625	\$4,824	\$5,086	\$5,315
TOTAL SUBSIDY (\$ MILLIONS)	\$43	\$64	\$20	\$17	\$16	\$12	\$8	\$8
PROVINCIAL SHARE 50%	\$21	\$17	\$10	\$8	\$8	\$5	\$4	\$4
FEDERAL SHARE 50%	\$22	\$27	\$10	\$9	\$8	\$7	\$4	\$4

**ASSISTED RENTAL PROGRAM**

ASSEMBLY

1657 OF UNITS APPROVED BECAME A STAST

NUMBER OF UNITS APPROVED BECOME A START  
AT 1200 ADVANCED IN YEAR AFTER APPROVAL EXCLUDING BN 1120 PER YR

191205 ADVANCED IN YEAR AFTER APPROVAL, DECLINING BY \$129 PER YEAR  
191206 INTEREST SCARING AS MARKET RATE AND FURTHER COSTS AFTER 10 YEARS

INTEREST BEARING AT MARKET RATE (NO FURTHER COST) AFTER 15/3/91 IS 10% (ASSUMED FAIRLY DETERMINING COST) OF BALANCE OUTSTANDING.

YEAR	1976 UNITS COMMITTED	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	25231													
STARTS AT 251	21446													
ADVANCE PER UNIT		\$1,200	\$1,030	\$960	\$940	\$720	\$600	\$480	\$360	\$240	\$120			
TOTAL ADVANCES (\$ MILLIONS)		\$76	\$23	\$21	\$18	\$15	\$13	\$10	\$8	\$5	\$3			
CUMULATIVE ADVANCES (\$ MILLIONS)		\$26	\$49	\$69	\$83	\$103	\$116	\$125	\$134	\$139	\$142			
1977 UNITS COMMITTED	56905													
STARTS AT 651	48589													
ADVANCE PER UNIT		\$1,200	\$1,080	\$960	\$940	\$720	\$600	\$480	\$360	\$240	\$120			
TOTAL ADVANCES (\$ MILLIONS)		\$58	\$52	\$46	\$41	\$35	\$29	\$23	\$17	\$12	\$6			
CUMULATIVE ADVANCES (\$ MILLIONS)		\$58	\$110	\$157	\$197	\$232	\$261	\$284	\$302	\$313	\$319			
1978 UNITS COMMITTED	17483													
STARTS AT 382	14861													
ADVANCE PER UNIT		\$1,200	\$1,080	\$960	\$940	\$720	\$600	\$480	\$360	\$240	\$120			
TOTAL ADVANCES (\$ MILLIONS)		\$18	\$16	\$14	\$12	\$11	\$9	\$7	\$5	\$4	\$2			
CUMULATIVE ADVANCES (\$ MILLIONS)		\$18	\$34	\$49	\$61	\$71	\$80	\$97	\$93	\$95	\$99			
TOTAL CUMULATIVE ADVANCES (\$ MILLIONS)		\$26	\$107	\$198	\$278	\$348	\$409	\$459	\$498	\$522	\$546	\$416	\$42	
COST AT 10% (\$ MILLIONS)		\$3	\$11	\$20	\$28	\$35	\$41	\$46	\$50	\$53	\$55	\$42	\$10	
1989	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989

## CALCULATION OF CANADA RENTAL SUPPLY PLANS

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DEBT DUE DATE IS 12 MONTHS FROM THE DATE OF COMMITMENT, WHICH IS 12 MONTHS FROM THE DATE OF CONSTRUCTION.

10007 IS 101 (ASSUMED GOV'T BORROWING RATE) OF OUTSTANDING LOAN BALANCE

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	\$28	\$25	\$18	\$15	\$13	\$10	\$7	\$6	\$5	\$4	\$5	\$3	\$2	\$1	(\$1)	(\$7)
	\$40	\$35	\$25	\$22	\$19	\$15	\$11	\$9	\$7	\$5	\$7	\$5	\$3	\$1	\$1	\$2
	\$45	\$40	\$29	\$24	\$21	\$16	\$12	\$10	\$8	\$6	\$8	\$6	\$3	\$1	\$1	\$2
	\$47	\$44	\$32	\$25	\$23	\$18	\$13	\$10	\$8	\$6	\$8	\$6	\$3	\$1	\$1	\$2
	\$53	\$48	\$35	\$29	\$25	\$19	\$14	\$11	\$9	\$7	\$9	\$7	\$4	\$2	\$1	\$2
			\$59	\$52	\$39	\$32	\$28	\$21	\$15	\$13	\$10	\$7	\$4	\$2	\$1	\$2
				\$62	\$55	\$40	\$34	\$29	\$22	\$17	\$15	\$11	\$8	\$5	\$3	\$2
					\$58	\$61	\$44	\$37	\$32	\$25	\$15	\$15	\$11	\$8	\$5	\$2
						\$72	\$64	\$48	\$39	\$34	\$25	\$19	\$15	\$11	\$8	\$2
							\$59	\$53	\$38	\$32	\$28	\$22	\$17	\$15	\$11	\$2
TOTAL MURB TAX COST (\$MILLIONS)	\$28	\$65	\$99	\$130	\$161	\$191	\$219	\$246	\$273	\$281	\$229	\$183	\$150	\$120	\$92	\$63
PROVINCIAL SHARE 1/3	\$9	\$22	\$33	\$43	\$54	\$64	\$73	\$82	\$91	\$94	\$76	\$61	\$50	\$40	\$31	\$23
FEDERAL SHARE 2/3	\$19	\$43	\$66	\$87	\$107	\$128	\$146	\$164	\$182	\$187	\$152	\$122	\$100	\$80	\$61	\$45

NEW NON-PROFIT AND COOPERATIVE  
ASSUMPTIONS

:FEDERAL COST IS 10% OF MORTGAGE BALANCE, DIFFERENCE BETWEEN 2% AND ASSUMED 10% MARKET RATE  
:FOR SIMPLICITY, ASSUME 1% OF OPENING PRINCIPAL BALANCE PAID OFF EACH YEAR  
:UNITS IN PLACE EQUALS SUM OF  
1978 TO 1982 UNITS PER CMHC  
21500 UNITS 1983 (CMHC INTERNAL DATA)

MORTGAGES BECOME OUTSTANDING 1 YEAR AFTER APPROVAL TO RECOGNIZE CONSTRUCTION DELAY

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
UNITS APPROVED	21500	0	0	0	0	0	0	0
UNIT COST	\$61,770	\$64,359	\$67,076	\$69,730	\$62,927	\$66,073	\$69,377	\$72,346
NEW MORTGAGES (\$ MILLIONS) COMMITTED	\$1,113	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL MORTGAGES OUTSTANDING (\$ MILLIONS)	\$3,606	\$4,683	\$4,636	\$4,590	\$4,544	\$4,499	\$4,454	\$4,409
SUBSIDY COST 10% OF MORTGAGES (\$MILLIONS)	\$361	\$468	\$464	\$459	\$454	\$450	\$445	\$441
TOTAL NON-PROFIT AND COOPERATIVE								
PROVINCIAL SHARE	\$18	\$18	\$18	\$19	\$19	\$20	\$20	\$20
FEDERAL SHARE	\$399	\$507	\$502	\$493	\$493	\$489	\$485	\$480
TOTAL	\$416	\$525	\$520	\$516	\$512	\$508	\$505	\$501

PUBLIC HOUSING

ASSUMPTIONS

141327 SECTION 40 UNITS AND 162805 SECTION 43/44 UNITS APPROVED TO END OF 1983 (SOURCE: CMHC INTERNAL DATA)

ANNUAL LOSS EQUALS SUM OF

1981 AVERAGE AMORTIZATION PER UNIT

1981 AVERAGE LOSS BEFORE AMORTIZATION, INCREASING AT 5% PER YEAR FOR INFLATION

SECTION 40 UNITS

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
NEW UNITS APPROVED	0	0	0	0	0	0	0	0
CUMULATIVE UNITS	41327	41327	41327	41327	41327	41327	41327	41327
AMORTIZATION	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776
LOSS BEFORE AMORTIZATION	\$1,138	\$1,195	\$1,255	\$1,317	\$1,383	\$1,452	\$1,525	\$1,601
TOTAL LOSS PER UNIT	\$2,914	\$2,971	\$3,031	\$3,094	\$3,160	\$3,229	\$3,301	\$3,378
RENT-TO-INCOME SUBSIDY (\$ MILLIONS)	\$120	\$123	\$125	\$123	\$131	\$133	\$135	\$140
PROVINCIAL SHARE 25%	\$30	\$31	\$31	\$32	\$33	\$33	\$34	\$35
FEDERAL SHARE 75%	\$90	\$92	\$94	\$96	\$98	\$100	\$102	\$105

SECTION 43/44 UNITS

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
NEW UNITS APPROVED	0	0	0	0	0	0	0	0
CUMULATIVE UNITS	162805	162805	162805	162805	162805	162805	162805	162805
AMORTIZATION	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776	\$1,776
LOSS BEFORE AMORTIZATION	\$1,138	\$1,195	\$1,255	\$1,317	\$1,383	\$1,452	\$1,525	\$1,601
TOTAL LOSS PER UNIT	\$2,914	\$2,971	\$3,031	\$3,094	\$3,160	\$3,229	\$3,301	\$3,378
RENT-TO-INCOME SUBSIDY (\$ MILLIONS)	\$474	\$484	\$493	\$504	\$514	\$526	\$537	\$550
PROVINCIAL SHARE 50%	\$237	\$242	\$247	\$252	\$257	\$263	\$269	\$275
FEDERAL SHARE 50%	\$237	\$242	\$247	\$252	\$257	\$263	\$269	\$275

TOTAL PUBLIC HOUSING

PROVINCIAL SHARE	\$273	\$273	\$273	\$284	\$290	\$296	\$303	\$310
FEDERAL SHARE	\$328	\$334	\$341	\$348	\$355	\$363	\$371	\$380
TOTAL	\$601	\$607	\$619	\$632	\$645	\$659	\$674	\$692

PRIVATE RENT SUPPLEMENT

ASSUMPTIONS

SUBSIDY LASTS 5 YEARS AFTER YEAR OF APPROVAL (I.E. UNITS UNDER SUBSIDY IN 1983 = UNITS APPROVED 1978 TO 1982)  
1983 UNITS APPROVED 1200 (SOURCE: CMHC INTERNAL ESTIMATE)

SUBSIDY PER UNIT \$3600 IN 1982 (SOURCE: CMHC INTERNAL DATA), INCREASING 5% PER YEAR FOR INFLATION

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
UNITS APPROVED	1200	0	0	0	0	0	0	0
UNITS COVERED BY SUBSIDY	12695	8499	4477	3227	2493	1200		
SUBSIDY PER UNIT	\$3,790	\$3,769	\$4,187	\$4,376	\$4,593	\$4,824		
TOTAL SUBSIDY (\$ MILLIONS)	\$48	\$34	\$19	\$14	\$11	\$6		
PROVINCIAL SHARE 50%	\$24	\$17	\$7	\$7	\$6	\$3		
FEDERAL SHARE 50%	\$24	\$17	\$7	\$7	\$6	\$3		